



## KANNUR UNIVERSITY

### (Abstract)

M.A. Economics Programme - under Choice Based Credit Semester System in Departments-Scheme of the Programme, Syllabus and Model Question Papers of Semester I Implemented with effect from 2019 Admission - Orders issued.

---

---

#### ACADEMIC BRANCH

No. Acad/C1/10376/2019

Civil Station (PO), Dated, 21.05.2019

---

---

- Read:
1. U.O.No.Acad/C3/2049/2009 dated 11/10/2010
  2. U.O.No.Acad/C3/2049/2009 dated 05/04/2011
  3. U.O.No.Acad A2/General/2018 dated 05.02.2019
  4. Letter from the HoD, Dept.of Economics of the University, dated 01.04.2019
  5. Syllabus of M.A. Economics Programme submitted by the HoD, Department of Economics dated 14.05.2019

### ORDER

1. The Regulations for P.G. Programmes under Choice Based Credit Semester System were implemented in the Schools/Departments of the University with effect from 2010 admission as per paper read (1) above and certain modifications were effected to the same vide paper read (2) .

2. As per the paper read (3) above, the nomenclature of M.A. Applied Economics Programme, conducted at the University Department, Thalassery Campus, palayad, was changed to 'M.A. Economics', w.e.f 2019 admission.

3. Meanwhile, the Vice-Chancellor directed the HoD, Department of Economics, Thalassery Campus, Palayad, to revise the Syllabus as per the new nomenclature. Accordingly the HoD, Dept.of Economics, vide paper read (4) above forwarded the Scheme, Syllabus & Model Question Papers for M.A. Economics Programme.

4. The Vice-Chancellor recommended certain modifications/addition to the aforesaid Syllabus, submitted by the HoD.

PTO

5. As per the modification suggested by the Vice-Chancellor, the HoD, Dept.of Economics, vide paper read (5) above, submitted the modified Scheme, Syllabus & Model Question Papers of M.A. Economics Programme in line with the Regulations for Choice Based Credit Semester System in the Departments/Schools, for implementation with effect from 2019 admission.

6. The Department Council has approved the Scheme, Syllabus & Model Question Papers of M.A. Economics Programme under Choice Based Credit Semester System for implementation with effect from 2019 admission.

7. The Vice Chancellor after considering the matter in detail and in exercise of the powers of the Academic Council conferred under section 11 (1) of Kannur University Act 1996 and all other enabling provisions read together with accorded sanction to implement the Scheme, Syllabus and Model Question Papers of Semester I of the M.A. Economics Programme under Choice Based Credit Semester System offered in University Department with effect from 2019 admission, subject to report before the Academic Council.

8. The Scheme, Syllabus and Model Question Papers of semester I of M.A. Economics Programme, to be implemented in the University Teaching Department from 2019 admission are uploaded, in the University Website. ([Kannuruniversity.ac.in](http://Kannuruniversity.ac.in))

Orders are, issued accordingly.

Sd/-

DEPUTY REGISTRAR (Academic)  
For REGISTRAR

To

The HoD, Dept.of Economics, Thalassery Campus, Palayad.

Copy to:

1. The Examination Branch (through PA to CE).
2. PS to VC / PA to PVC / PA to R / PA to CE
3. DR / AR 1 (Acad).
4. The Computer Programmer (for uploading in the Website)
5. SF / DF / FC /.



Forwarded/ByOrder

SECTION OFFICER



**KANNURUNIVERSITY**

**(Abstract)**

M.A. Economics Programme - under Choice Based Credit Semester System in Departments- Syllabus and Model Question Papers of II, III and IV Semesters in the University Department with effect from 2019 Admission -Implemented- Orders issued.

---

**ACADEMIC C SECTION**

Acad/C1/10376/2019

Dated: 10.10.2019

---

Read:- 1. U.O.No.Acad/C3/2049/2009 dated 11/10/2010  
2.U.O.No.Acad/C3/2049/2009 dated 05/04/2011  
3.U.O.No.Acad A2/General/2018 dated 05/02/2019  
4.Letterfrom the HoD, Dept.of Economics of the University, dated 01/04/2019  
5.U.O.No.Acad/C1/10376/2019 dated 21.05.2019  
6.The letter dated 28-9-2019 along with the Syllabus of M.A.Economics Programme,sumitted by the Head,Department of Economics of the University

**ORDER**

1. The Regulations for P.G.programmes under Choice Based Credit Semester System were implemented in the Schools/Departments of the University with effect from 2010 admission as per paper read (1) above and certain modifications were effected to the same, vide the paper read (2).

2. As per the paper read (3) above, the nomenclature of M.A. Applied Economics Programme, conducted at the University Department, Dr.Janaki Ammal Campus, Palayad,(formerly Thalassery Campus) was changed to 'M.A. Economics', w.e.f 2019 admission.

3. Meanwhile, the Vice-Chancellor directed the Head, Department of Economics, Thalassery Campus, Palayad, to revise the Syllabus as per the new nomenclature.

4. Accordingly, the Head, Dept.of Economics, vide paper read (4) above submitted the Scheme, Syllabus & Model Question Papers of the M.A. Economics programme.

5. As per paper read (5) above Vice-Chancellor implemented the Scheme of the whole programme and the Syllabus & model question papers of only the First Semester of the M.A. Economics Programme w.e.f 2019 admission.

6. Later,the Head, Dept.of Economics, vide paper read (6) dated above, submitted the Scheme, Syllabus & Model Question Papers of the remaining Semesters of the M.A. Economics programme, in tune with the Regulations for Choice Based Credit Semester System in the Departments/Schools, for implementation with effect from 2019 admission and requested to approve the Syllabus of the remaining semesters(II to IV) and issue necessary orders in this regard.

PTO

7. The Department Council approved the Scheme, Syllabus & Model Question Papers of M.A. Economics Programme under Choice Based Credit Semester System for implementation with effect from 2019 admission.

8. The Vice Chancellor after considering the matter in detail and in exercise of the powers of the Academic Council conferred under section 11 (1) of Kannur University Act 1996 and all other enabling provisions read together with, accorded sanction to implement the Syllabus and Model Question papers of the II, III and IV Semesters of the M.A. Economics programme under Choice Based Credit Semester System conducted at the University Department, at Dr.Janaki Ammal Campus,Palayad,Thalassery,with effect from 2019 admission, subject to reporting before the Academic Council.

9.The Syllabus and Model Question papers of II, III and IV Semesters of the M.A. Economics programme, to be implemented in the University Department from 2019 admission are uploaded in the University website. (**kannuruniversity.ac.in**).

Orders are, issued accordingly.

*Sd/-*

**BALACHANDRAN V K**

**DEPUTY REGISTRAR (ACAD)**

For REGISTRAR

To: The Head, Dept.of Economics,Dr.Janaki Ammal Campus, Palayad

Copy To: 1. The Examination Branch (through PA to CE).

2.EP-IV Section

3.PS to VC / PA to PVC / PA to R / PA to CE

4.DR / AR 1 (Acad).

5.The Computer Programmer (for uploading in the website)

6.SF / DF /FC /



Forwarded / By Order

*[Signature]*  
SECTION OFFICER

**Appendix to U.O.No.Acad/C1/10376/2019, dated, 21.05.2019****M.A. Economics  
Structure, Syllabus and Model Question Papers**

Syllabus and course content under Choice Based Credit Semester System-. Syllabus with effect from 2019 admission onwards.

**ELIGIBILITY CRITERIA FOR ADMISSION**

The academic eligibility for admission to M.A. Economics programme offered in the Department is any Bachelors Degree with at least 50% of marks in the aggregate. SC/ST students will be provided a relaxation of 5% in the eligibility of marks. Admission to M.A Economics is purely on the basis of Entrance Examination. The Entrance Examination will be of 120 minutes duration for 100 marks. The questions for Entrance Examination are of objective multiple choices with 50% of questions from Economics, 25% from Statistics, 10% from Mathematics and 15% questions as General Awareness expecting from a graduate of a university. The syllabus of the Entrance Examination will be provided along with admission prospectus.

**RESERVATION**

As per government/university rules.

**DURATION OF COURSE**

This course shall consist of four semesters covering a total of two academic years.

**COURSE OF THE STUDY**

The course consists of the core subjects and elective subjects as follows.

**Core Papers**

Sl. No.	Course Code	Course Title	Instructional Hours/week	Credit
1	EcC001	Micro Economic Theory I	5	5
2	EcC002	Macro Economic Theory I	5	5
3	EcC003	Quantitative Techniques for Economic Analysis	5	5
4	EcC004	Development Issues of Indian Economy (With special reference to Kerala)	5	5
5	EcC005	Microeconomic Theory II	5	5
6	EcC006	Macroeconomic Theory II	5	5
7	EcC007	Econometrics	5	5
8	EcC008	Financial Institutions and Markets	5	5
9	EcC009	International Economics	5	5
10	EcC010	Environmental Economics	5	5
11	EcC011	Research Methodology	5	5

12	EcC012	Dissertation	8	7
13	EcC013	Viva-Voce	–	2

### Elective Papers

Sl. No.	Course Code	Course Title	Instructional Hours/week	Credit
1	EcE001	Public Economics	4	4
2	EcE002	Economics of Growth and Development	4	4
3	EcE003	Population Studies	4	4
4	EcE004	Operations Research for Economic Analysis	4	4
5	EcE005	Mathematical Economics	4	4
6	EcE006	Computer Application in Economic Analysis	4	4
7	EcE007	Applied Welfare Economics	4	4
8	EcE008	Business Economics	4	4
9	EcE009	Agricultural Economics	4	4
10	EcE010	Industrial Economics	4	4
11	EcE011	Energy Economics	4	4
12	EcE012	Transport Economics	4	4
13	EcE013	Security Analysis and Portfolio Management	4	4
14	EcE014	Project Formulation and Evaluation	4	4
15	EcE015	Health Economics	4	4
16	EcE016	Development of Economic Ideas	4	4
17	EcE017	Applied Econometrics	4	4

### Scheme of Studies Semester wise

A minimum of 16 credits is offered in each semester. In the fourth semester there shall be Dissertation and Viva-Voce. For Dissertation it is 7 credit and Viva-Voce it is 2 credits. The Viva voce examination is based on the dissertation submitted by the candidate and the viva Board includes one external expert.

**SEMESTER I**

Course Code	Course Title	Core/ Elective	Credit	Instructional Hrs/week	Seminar Hrs/Week	Instructional Hrs/Sem.	Internal Marks	End Sem. Marks	Total
EcC001	Microeconomic Theory I	Core	5	5	2	112 (16x7)	40	60	100
EcC002	Macroeconomic Theory I	Core	5	5	1	96 (16x6)	40	60	100
EcC003	Quantitative Techniques for Economic Analysis	Core	5	5	1	96 (16x6)	40	60	100
EcC004	Development Issues of Indian Economy (With special reference to Kerala)	Core	5	5	1	96 (16x6)	40	60	100
		Total Credit	20	20	5	400 (16*25)	160	240	400

**SEMESTER II**

Course Code	Course Title	Core/ Elective	Credit	Instructional Hrs/week	Seminar Hrs/Week	Instructional Hrs/Sem.	Internal Marks	End Sem. Marks	Total
EcC005	Microeconomic Theory II	Core	5	5	1	96 (16x6)	40	60	100
EcC006	Macroeconomic Theory II	Core	5	5	2	112 (16x7)	40	60	100
EcC007	Econometrics	Core	5	5	1	96 (16x6)	40	60	100
EcC008	Financial Institutions and Markets	Core	5	5	1	96 (16x6)	40	60	100
		Total Credit	20	20	5	400 (16*25)	160	240	400

**SEMESTER III**

Course Code	Course Title	Core/ Elective	Credit	Instructional Hrs/week	Seminar Hrs/Week	Instructional Hrs/Sem.	Internal Marks	End Sem. Marks	Total
EcC009	International Economics	Core	5	5	1	96 (16x6)	40	60	100
EcC010	Environmental Economics	Core	5	5	1	96 (16x6)	40	60	100
	Elective – I	Elective	4	4	1	80 (16x5)	40	60	100
	Elective – II	Elective	4	4	1	80 (16x5)	40	60	100
	Elective – III	Elective	4	4	1	80 (16x5)	40	60	100
		Total Credit	22	22	5	432 (16*27)	200	300	500

**SEMESTER IV**

Course Code	Course Title	Core/ Elective	Credit	Instructional Hrs/Week	Seminar Hrs/Week	Instructional Hrs/Sem.	Internal Marks	End Sem. Marks	Total
EcC011	Research Methodology	Core	5	5	2	112 (16x7)	40	60	100
	Elective – IV	Elective	4	4	2	96 (16x6)	40	60	100
EcC012	Dissertation	Core	7	8	–	128 (16x8)	–	60	60
EcC013	Viva	Core	2	–	–	–	–	40	40
		Total Credit	18	17	4	336 (16*21)	80	220	300

**Four Semester Total Credits – 80****Total Marks - 1600**

Continuous Assessment includes Assignments, Seminars, Periodic Written Examinations etc. Performance of each student in an assessment should be intimated to him or her within one month of the assessment.

**Dissertation work**

The students admitted to M.A. Economics course have to submit a dissertation in the last semester of the course and they have to submit the same for qualifying the university examination. The Dissertation is for 60 marks and viva voce based Dissertation carries 40 marks and a candidate has to acquire the minimum Grade Point “C” for pass in both Dissertation and Viva Voce



## Evaluation

Evaluation of the students shall be done by the faculty member who teaches the course on the basis of Continuous Assessment and End Semester Examination. The proportion of the distribution of marks among End Semester and Continuous Assessment shall be 60-40.

<b>Split up of Marks under Choice Based Credit Semester System</b>	
<b>Internal Marks</b>	
Mid Semester Exam	16
Assignment	8
Seminar Presentation	16
Internal Total	40
End Semester External Marks	60
<b>SEMESTER TOTAL</b>	<b>100</b>

## Examination and Grading

Conduct of Examination, Grading of the students and Issuing Grade card etc. are based on the regulations for PG Programmes under Choice Based Credit Semester System in the Departments/Schools effective from 2010 Admission.

**MICROECONOMIC THEORY –I**  
**CORE COURSE**  
**COURSE CODE – EcC001**

**Objectives**

This subject is aimed at providing knowledge on basic Economic Principles, as well as applied skills to enable the students to gain decision making and skills.

**Outcome**

This paper intends to give the students a good understanding of the economic theory and applying it in business decisions. To gain sound knowledge in basic Economic theories, concepts and models. To gain sound knowledge to apply economic theories and models to execute market functions.

**Module-1**

**The methodology of microeconomics:** deductive method- testing of economic hypothesis through statistical methods- inductive method- integration of two methods- nature of economic laws and generalization- economic models-process of building economic models- uses – Production possibility curve- recent approaches to economic theory- role of significance of assumptions in economic analysis- theory and policy in economics- value judgment in economics-comparative static approach – the role of mathematics in economic analysis.

**Theory of consumer choice-1:** Evaluation of cardinal and ordinal utility analysis- Slutsky theorem- revealed preference theory- Risk and uncertainty in demand choices –measuring risk – risk aversion and risk lover – Neumann-Morgenstern method of constructing utility index – Friedman-Savage hypothesis – trade off between risk and return – the investor’s choice problem: household portfolio decisions under conditions of uncertainty – reducing risks and uncertainty – the state preference theory-Bandwagon effect- Veblen effect- Cob-web theorem

**References/ Compulsory Readings**

1. Gregory N. Mankiw. 2009. *Principles of Microeconomics*. South Western Cengage Learning.
2. Robert Y. Awh. 1976. *Microeconomics: Theory and Applications*. John Wiley and Sons.
3. James M. Henderson and Richard E. Quandt. 2003. *Microeconomic Theory: A Mathematical Approach*. New Delhi: Tata McGraw-Hill Publishing Co. Ltd.
4. George J. Stigler. 1996. *The Theory of Price*. Prentice Hall of India Pvt. Ltd.
5. Dominick Salvatore. 2003. *Microeconomics: Theory and Applications*. Oxford University Press.
6. Robert S. Pindyck and Daniel L. Rubinfeld. 2003. *Microeconomics*. Prentice Hall of India.

**Supplementary/ Suggested Readings**

- Robert H. Frank. 2000. *Microeconomics and Behaviour*. Irwin Mc. Graw Hill.
- Donald Stevenson Watson and Malcolm Getz. 1996. *Price Theory and its Uses*. New Delhi: AITBS Publishers and Distributors.

## Module-2

**Theory of consumer choice-II:** Recent developments in the theory of market demand: Attribute theory of demand– inter temporal choice of consumption – Hick’s logical ordering theory of demand – pragmatic approach to demand analysis – constant elasticity demand function – distributed lag models of demand – Nerlove’s model – Houthakker’s and Taylor’s model – linear expenditure systems.

**Theory of production:** laws of production- laws of returns to scale- law of variable proportions- internal and external economies- Production function – types–Cobb- Douglas production function – CES production function – technical progress – equilibrium of the multi product firm – types of cost- traditional and modern theory of cost- linear programming problem- features- solution to LPP-input output analysis

### References/ Compulsory Readings

1. Hal R. Varian. 2000. *Intermediate Microeconomics: A Modern Approach*. New Delhi: Affiliated East West Press.
2. Jack Hirshleifer, Amihai Glazer and David Hirshleifer. 2005. *Price Theory and Applications: Decisions, Markets and Information*. Cambridge University Press.
3. David M. Kreps. 2004. *Microeconomics for Managers*. London: W.W. Norton & Co.
4. William J. Baumol. 2000. *Economic Theory and Operations Analysis*. Prentice Hall of India Pvt.Ltd.
5. Walter Nicholson. 1992. *Microeconomic Theory: Basic Principles and Extensions*. Orlando: The Dryden Press.
6. H.A. John Green. 1976. *Consumer Theory*, Mac Millan.
7. Koutsoyiannis A. 1979. *Modern Microeconomics*, Mac Millan.
8. Dominick Salvatore. 2003. *Microeconomics: Theory and Applications*. Oxford University Press.

### Supplementary/ Suggested Readings

- Edwin Mansfield & Gary Yohe. 2004. *Microeconomics*. W.W.Norton & Co.
- John P. Gould, Edward P. Lazear. 2003. *Microeconomic Theory*.

## Module-3

**Market structure:** Perfect competition- monopoly- monopolistic competition-Duopoly and Oligopoly: Characteristics – collusive and non-collusive models – Cournot’s model – Edgeworth’s model – Bertrand’s model – Chamberlin’s model – Stackelberg’s model – Sweezy’s kinked-demand model – price leadership models of low-cost price leader, dominant firm price leader and barometric price leadership – cartels aiming at joint profit maximization and market sharing cartels.

**Markets with asymmetric information:** market for ‘lemons’ – Markets signaling-adverse selection-moral hazard-screening-principal agent problem- the winner’s curse – efficiency wage theory.

**References/ Compulsory Readings**

1. David Laidler. 1981. *Introduction to Microeconomics*. New Delhi: Heritage Publishers.
2. David Begg, Stanley Fisher and Rudiger Dornbusch. 1994. *Economics*. Mc Graw-Hill Publishing Company.
3. Richard G. Lipsey and K. Alec Chrystal. 1999. *Principles of Economics*. Oxford University Press.
4. Hicks. 1956. *A Revision of Demand Theory*. Oxford University Press.
5. Koutsoyiannis A. 1979. *Modern Microeconomics*. Mac Millan.
6. Robert S. Pindyck and Daniel L. Rubinfeld. 2003. *Microeconomics*. Prentice Hall of India.

**Supplementary/ Suggested Readings**

- Robert H. Frank. 2000. *Microeconomics and Behaviour*. Irwin Mc. Graw Hill.
- Donald Stevenson Watson and Malcolm Getz. 1996. *Price Theory and its Uses*. New Delhi: AITBS Publishers and Distributors.
- Gravelle. A and R. Rees. 2004. *Microeconomics*. Singapore: Pearson Education Pvt. Ltd.

**MACROECONOMIC THEORY- I**  
**CORE COURSE**  
**COURSE CODE – EcC002**

**Objectives**

This course aims at students to gain strong fundamentals of macro economy theories policies and models in a historical prospective. The paper examines the basic principles underling the functioning of an economy and deals with the determination of major macroeconomic aggregates. To introduce the students on the sectoral flow of national income, its accounting and factors influencing income at current and constant prices.

**Outcome**

To enable students develop a critical insight on classical Keynesian macroeconomic models and a functioning at four different market conditions.

**Module-1:**

**Development of Macro Economics:** Classical, Keynesian, Neoclassical, Post Keynesian, Neo-Keynesian, New Classical, New Keynesian Developments – New Macro Economics – Investment Multiplier – Static and Dynamic Multiplier – Keynesian Model of Income Determination in Three Sector and Four Sector Economies.

**Neo-classical and Keynesian Synthesis:** Hicks-Hansen ISLM Model – General Equilibrium-Relative Effectiveness of Monetary and Fiscal Policies – Keynesian and Classical Versions – Extension of ISLM Model with govt. sector –Extension of ISLM model with Labour market and flexible prices – Unemployment and labour market – Three sector macro model – Keynesian and Neo-classical versions.

**References/ Compulsory Readings**

1. Ackley G. 1978. *Macro Economics Theory and Policy*. New York: Macmillan.
2. Andrew B. Paul and Ben S Bernanke. *Macro Economics*. New Delhi: Pearson Education.
3. Eugene Diulio. *Theory and Problems of Macro Economics*. Singapore: Schaum's Outline Series. McGraw Hill Publishing Company.
4. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.
5. Rosalind Levasic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.

**Supplementary/Suggested Readings**

- Rudiger Dornbusch, Stanley Fischer and Richard Startz. 1998. *Macro Economics*. New Delhi: Tata McGraw Hill Publishing Company Ltd.

**Module-2:**

**Behavioural Foundations of Macro Economics :** Sectoral Demand Functions – Consumption Demand – Kuznet's Consumption Puzzle – Absolute Income Hypothesis – Relative Income Hypothesis – Permanent Income Hypothesis – Life Cycle Hypothesis – Inter-temporal Choice in Consumption. Investment Demand – Keynesian Approach – MEC – Post Keynesian Approach – Tobin's Q-ratio – Metzler's investment inventories analysis-Accelerator Theory of Investment – Financial Theory of Investment.

**References/ Compulsory Readings**

1. Keynes, J. M. 1961. *General Theory of Employment, Interest and Money*. London: Macmillan.
2. Mankiw N. G. *Macro Economics*.
3. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.
4. Rosalind Levasic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.

**Supplementary/Suggested Readings**

- Snowdown B, H.R Vane and F. Wynarczyk. *A Modern Guide to Macro Economics: An introduction to competing schools of thought*.

**Module-3:**

**Theory of Demand and Supply of Money :** Classical and Keynesian Approach to demand for and supply of money – Post Keynesian Approach – Real Balance Effect – Pigou, Patinkin, Baumol, Friedman and Tobin – Arrow-Debreu model- overlapping generation model of Samuelson- cash in advance model of Clower-Monetarism and Fiscalism – Money supply in an open economy – High Powered Money – Money Multiplier – Control of Money supply – Behavioural Model of Money supply – Endogenous Money supply theory.

**References/ Compulsory Readings**

1. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.
2. Rosalind Levasic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.

**Supplementary/Suggested Readings**

- Rudiger Dornbusch, Stanley Fischer and Richard Startz. 1998. *Macro Economics*. New Delhi: Tata McGraw Hill Publishing Company Ltd.
- Y. P. Venieries and F. D. Sebold. *Macro Economic Models and Policy*

**QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS**  
**CORE COURSE**  
**COURSE CODE – EcC003**

**Course Objectives**

This course is designed to provide economic knowledge, statistical and mathematical skills with respect to: matrix algebra, summary measures of central tendency and variation/dispersion; summary measures of correlations/association; probability and distributions. This course enables the students to develop the analytical and empirical skills related various statistical tests necessary to conduct research.

**Course Outcome**

Students will gain knowledge and skills in handling economic data, analyzing and interpreting with the help of statistical and mathematical methods.

**Module I**

Matrices-Addition and Subtraction of matrices-Multiplication of matrices-Determinant of matrices-Inverse matrices-Rank of a matrix- Solving Linear equations with the inverse-Cramer's rule for matrix solutions – Solution of simultaneous equations using Cramer's Rule - Measures of relationship – simple correlation and regression analysis- multiple correlation and partial correlation.

**References/Compulsory Readings**

1. Agarwal, Bharadwaj and Gupta. 1996. *Quantitative techniques in Economics*. Kalyani Publications.
2. Kothari.C.R. *Quantitative techniques*. New Delhi: Vikas publishing house.
3. Taro Yamane. *Mathematics for Economists*. New Delhi: Printice Hall of India.
4. Bowers David.1984 *Statistics for Economics*. Macmillan.
5. Alpha C. Chiang. *Fundamental Methods of Mathematical Economics*. Me. GrawHill.
6. Elhance, *Fundamental methods of Statistics*.

**Supplementary/suggested Readings**

1. Monga,G.S.2003. *Mathematics and Statistics for Economists*. New Delhi : Vikas Publications.
2. Anjan Mukherji and Subrata Guha. *Mathematical Methods and Economic Theory*.
3. A.H. Smith and W. A. Albrecht. *Fundamental Concepts of Analysis*.
4. C.P.Simon and L.E. Blume. *Mathematics for Economists*.

**Module II**

Probability theory- Concept of Probability- Different approaches of Probability: Classical, Empirical and Axiomatic approaches- Theorems of Probability: Addition and Multiplication Theorem- Conditional Probability –Bayes' theorem- Random variables and Probability distribution, Mathematical expectation- Probability Distributions: Discrete and Continuous Distributions: Binomial, Poisson, Multinomial, Negative Binomial, Lognormal, Pareto and Normal distributions-properties and applications

**References/Compulsory Readings**

- Murray R Spiegel.1990. *Probability Theory*. Shaum Series.
- Gupta.S.P. *Statistical Methods*. New Delhi :Sulthan Chand and Sons.

**Supplementary/suggested Readings**

- Damodar Gujarathi.2008. *Basic Econometrics*. 5<sup>th</sup> edition.

**Module III**

Population and Sample-sampling and sample designs-theoretical basis of sampling-methods of sampling- Parameter and Statistic–Measurement and Scaling techniques- Sampling Distribution and Standard Error-Central limit theorem-Distribution of Sample mean, Student's t, Z,  $\chi^2$  and F distributions- Theory of Estimation: Point estimation and Interval estimation-Properties of good estimator-Testing of hypothesis- Null and alternative hypothesis- Type I and Type II errors – Critical region –Level of significance-Power of test – Procedure of testing of hypothesis-  $\chi^2$  test of goodness of fit,  $\chi^2$  test for independence – Tests of significance for attributes –Tests of significance for large samples and small samples - Analysis of Variance techniques- F test and ANOVA –One-way and Two way classification.

**References/Compulsory Readings**

- Willaim.G.Kochran.2007. *Sampling Techniques*. Wiley India.
- Ajay.S.Gaur and Sanjay.S.Gaur. 2009. *Statistical Methods for Practice and Research*. Response Books.
- McClave James T, P.George Benson and Terry Sincich. 2000. *Statistics for Business and Economics*. Prentice Hall.

**Supplementary/suggested Readings**

- Speigal.M. R. 2000. *Theory and problems of Statistics*. London: McGraw Hill.
- Gupta.S.C.2000. *Fundamentals of Applied Statistics*. New Delhi: S.Chand.



**DEVELOPMENT ISSUES OF INDIAN ECONOMY  
(WITH SPECIAL REFERENCE TO KERALA)  
CORE COURSE  
COURSE CODE – EcC004**

**Objectives**

This course covers the conceptual differences between economic growth and development, structural and demographic changes in India and Kerala economy, development issues like poverty, unemployment and inequalities, government programmes for tackling the issues, data bases on Indian economy, interrelation and terms of trade between industry and agriculture, developments, problems and policies for agriculture and industry, inclusive growth and rural development, India's foreign trade, position and problems in balance of payment and trade, money supply, regional economic integration and fiscal performance of Kerala economy.

**Outcome**

The course provides the students a conceptual clarity on various dimensions of economic growth and development and a critical understanding of changes, issues and policies with respect to development of Indian and Kerala economy.

**Module-1**

Growth Vs Development: Concept, Measurement and Problems-basic need approach-Sustainable Development -Structural changes in Indian Economy since independence–debate on Market – Plan Socialism- Neo Liberalism- Washington Consensus -Structural adjustment Programme-Impact of economic recession 2008 on Indian economy- Second Generation Reform-Demographic Changes : Population Statistics- Poverty ,Unemployment and inequality– Concepts and measurements, trend and approaches of Poverty – Amartya Sen. – Entitlement and standard of living approach –Capability approach to poverty –magnitude of unemployment-An assessment of poverty alleviation and employment generation programmes- Inequality– Introduction to databases on Indian economy-NSSO, NAS, Handbook of statistics, Economic Review, Economic Survey, CSO, ASI.

**References/ Compulsory Readings**

1. A P Thirlwall. 1999. *Growth and Development*. 6th Edition. Macmillan Press Ltd.
2. Vijay Joshi and IMD Little. 1991 and 2001. *India's Economic Reforms*. New Delhi: OUP.
3. Nayyar Deepak. 2008. *Liberalization And Development: Collected Essays*. New Delhi: OUP.
4. Bhagavathi Jagadish. 1993. *India in Transition*. New Delhi: OUP.
5. BimalJalan: 1992. *Indian Economic Crisis: The Way Ahead*. New Delhi: OUP.
6. AmartyaSen. 1982. *Poverty and Famine: An Essay on Entitlement and Deprivation*. NewDelhi: OUP.
7. The Standard of Living: Tanner Lectures – CUP.1987 and 2002. *India Development and Participation*. New Delhi: OUP,

8. A Sen. 1973. *On economic inequality*. Oxford: Clarendon Press.
9. RBI (website: rbi.org). Database on Indian Economy
10. Bardhan, Pranab. 1994. *The Political Economy of Development in India*. New Delhi: OUP.
11. V M Dandekar. *The Indian Economy 1947-97; Transforming Traditional Agriculture*. Vol. I
12. A P Thirlwall. 1999. *Growth and Development*. 6th Edition. Macmillan Press Ltd.
13. Uma Kapila. 2008-09. *India's Economic development since 1947*. 3rd edition. New Delhi: Academic Foundation.
14. *Recent Developments in Indian Economy. 1994 and 1995*. Part 3 and 4. New Delhi: Academic Foundation.
15. R K Sinha. 1998. *Economic Development, Planning and Policy in India*. Deep and Deep.
16. Robert, E B Lucas, and Gustar F Papanek. 1989. *Indian Economy: Recent Developments and Future Prospects*, New Delhi: OUP.
17. Terence J Byres. 1999. *Major Debates on Indian Economy*. New Delhi: OUP.
18. Ruddar Dutt, and KPM Sundaram. 2009. *Indian Economy*. New Delhi: S Chand Co. Ltd.
19. A D N Bajpai, S K Chaubey, N G Pendsc, and S K Shrivastava. 2007. *Emerging Trends in Indian Economy*. New Delhi: Atlantic Publishers & Distributors.
20. Basu, Kaushik. 2004. *India's emerging economy*. New Delhi: OUP.
21. RBI *monthly bulletin*.
22. Nayyar Deepak. 2008. *Liberalization And Development: Collected Essays*. New Delhi: OUP.
23. BimalJalan. 1992. *Indian Economic Crisis: The Way Ahead*. New Delhi: OUP.
24. Bimal Jalan. 2000. *India's Economic Policy Preparing for the 21st Century*. 1996. New Delhi: Penguin.
25. C T Kurien. 1978. *Poverty, Planning and Social Transformations – An Alternative in Development Planning*. New Delhi: Allied Publishers.
26. C.T Kurien. 1992. *The Economy. An interpretative introduction*. Sage Publications.
27. C. Rangarajan. 1998. *Select Essays on Indian economy*. New Delhi: UBS Publishers & Distributors Ltd.

### Supplementary/suggested Readings

- Acharya Shanker and Mohan Rakesh. 2011. *India's Economy: Performance and Challenges*. New Delhi :Oxford University Press.
- Balakrishnan Pulpare. 2011. *Economic Growth in India, History and Prospects*. New Delhi: Oxford University Press.
- T N Srinivasan. 2011. *Growth Sustainability and India's Economic reforms*. New Delhi :Oxford University Press.
- S. Acharya .2012. *India After the Global Crisis*. New Delhi: Orient Blackswan.
- AN Agarwal. 2001. *Indian Economy: Problems of Development and Planning*. New Delhi: Wishwa Publication.
- B.A.Prakash. 2012. *Indian Economy since 1991*. New Delhi: Dorling Kindersly.

- Angrej Sing Rana. 2017. *Recent Advances in Indian Economy*. Delhi: Swastic Publication Limited.
- Manu Shro New Delhi ff. 2010. *Indian Economy: A Retrospective View*. Edited by Deenkhat Khate. New Delhi. Academic Foundations.
- D.N.Bhattacharya. 2012. *Indian Economic Development*. New Delhi. Regal Publication Limited.
- Uma Kapila.2017. *Indian Economy: Performance and Policies*. 17th edition, Academic Foundation.
- Uma Kapila.2018. *Indian Economy Since Independence: A Comprehensive And Critical Analysis of India's Economy 1947-2018*.Academic Foundation.
- Nilanjan Banik. 2015. *The Indian Economy: A Macro Economic Perspective*. Sage Publications.
- Janakarajan S, Venktachalam L and Maria Saleth R.2015. *Indian Economy in Transition: Essays in Honour of C.T Kurien*. Sage Publication.
- Prankrishna Pal.2008. *Reforms and Structural Changes in India*. Deep and Deep Publication Pvt. Ltd.
- Shivani Jaswal, Isha Jaswal, and Manisha Raj. 2012. *Structural Transformations of Indian Economy*. Lambert Academic Publishing.
- Rama P Kanungo, Chris Rowley, and Anurag N. Banergee. 2018.*Changing the Indian Economy, Renewal, Reform and Revival*. copy right© Elsevier B.V.
- Rabindra Kumar Misra. 2017. *Indian Economy: Past, Present and Future*. New Delhi: Avon Publications.
- RBI *monthly bulletin*.
- Government of India. *Economic Survey for various years*.
- OECD *Economic Surveys-India*. 2017
- Government of India. *NSSO reports-various rounds*. Ministry of Statistics and Programme Implementation.
- RBI. *Handbook of Statistics for various years*.

## Module-2

Agriculture & Industry –changing interrelations -terms of trade between Industry & Agriculture-  
 Markets in agriculture -land and credit markets-New agricultural policies and agrarian crisis-  
 WTO and Indian Agriculture–Revolution in agriculture- concepts of Food Security –Food  
 Availability –National Food Security Mission- Industrial policy of 1991–organized and  
 unorganized sectors – Privatization and Disinvestment- NITI Aayog-Industrial development in  
 India-Rural development in India-Inclusive growth-micro finance-National Rural Employment  
 Guarantee Programme (NREGP)- Millennium Development Goals-National Rural Health  
 Mission(NRHM)-India & Global Economy –India’s share in global trade- BOP position and  
 problems of India-Capital Account Convertibility -Balance of Trade (Export and Import) –  
 Foreign Trade policy-Impact on Domestic Money Supply – Inflation-Debate on WPI vs. CPI–  
 Impact of Demonetization on Indian economy-regional economic integration and Indian  
 Economy.

### References/ Compulsory Readings

1. Bhagavathi Jagadish. 1993. *India in Transition*. New Delhi: OUP.
2. V M Dandekar. *The Indian Economy 1947-97; Transforming Traditional Agriculture*. Vol. I
3. Uma Kapila. 2008-09. *India's Economic development since 1947*. 3rd edition. New Delhi: Academic Foundation.
4. *Recent Developments in Indian Economy.1994 and 1995*. Part 3 and 4.New Delhi:Academic Foundation.
5. Robert, E B Lucas, and Gustar F Papaneck. 1989.*Indian Economy: Recent Developments and Future Prospects*. New Delhi: OUP.
6. Terence J Byres.1999.*Major Debates on Indian Economy*. New Delhi: OUP.
7. Ruddar Dutt and KPM Sundaram. 2009. *Indian Economy*. New Delhi: S Chand Co. Ltd.
8. A D N Bajpai, S K Chaubey, N G Pendsc, and S K Shrivastava. 2007. *Emerging Trends in Indian Economy*. New Delhi: Atlantic Publishers & Distributors.
9. Basu, Kaushik. 2004. *India's emerging economy*. New Delhi: OUP.
10. Bimal Jalan. 2000. *India's Economic Policy Preparing for the 21st Century*. 1996. New Delhi: Penguin.
11. C.T Kurien. 1992. *The Economy. An interpretative introduction*. Sage Publications.
12. Patnaik, Prabhat. 1988. *Time, Inflation And Growth: Some Macroeconomic Themes In An Indian Perspective (R.C. Dutt Lectures On Political Economy, 1984)*. Orient Longman.
13. S. S. Tarapore. 2000 and 2006. *Issues in Financial Sector Reforms*. New Delhi:UBS Publishers and Distributors Ltd.,
14. C. Ram manohar Reddy.2017. *Demonitization and Black Money*. Orient BlackSwan publication.
15. Tamal Bandyopadhyay .2017. *From Lahman to Demonetization: A Decade of Disruptions*.
16. *Reforms and Misadventures*. Penguin Books India Pvt. Ltd.
17. B.K.Sahu. 2003. *Rural Development in India*. Anmol Publisher.
18. M.A.Alam.2012.*Planning and Rural Development*. Rajat Publication.
19. Katar Singh and Anil Shishodia. 2016. *Rural Development: Principles, Policies and Management*. Sage Publication India Pvt Ltd.

### Supplementary/suggested Readings

1. Acharya Shanker and Mohan Rakesh. 2011. *India's Economy: Performance and Challenges*. New Delhi:Oxford University Press.
2. A Vaidyanathan .2009. *Agricultural Growth in India*. New Delhi: Oxford University Press.
3. AN Agarwal.2001. *Indian Economy: Problems of Development and Planning*. New Delhi: Wishwa Publication.
4. Angrej Sing Rana. 2017. *Recent Advances in Indian Economy*. Delhi: Swastic Publication Limited.
5. Manu Shro New Delhi ff. 2010. *Indian Economy: A Retrospective View*. Edited by Deenkhat Khate. New Delhi. Academic Foundations.

6. D.N.Bhattacharya. 2012. *Indian Economic Development*. New Delhi. Regal Publication Limited.
7. Uma Kapila.2017. *Indian Economy: Performance and Policies*. 17th edition, Academic Foundation.
8. Uma Kapila.2018. *Indian Economy Since Independence: A Comprehensive And Critical Analysis of India's Economy 1947-2018*.Academic Foundation.
9. Nilanjan Banik. 2015. *The Indian Economy: A Macro Economic Perspective*. Sage Publications.
10. Janakarajan S, Venktachalam L and Maria Saleth R.2015. *Indian Economy in Transition: Essays in Honour of C.T Kurien*. Sage Publication.
11. Prankrishna Pal.2008. *Reforms and Structural Changes in India*. Deep and Deep Publication Pvt. Ltd.
12. Shivani Jaswal, Isha Jaswal, and Manisha Raj. 2012. *Structural Transformations of Indian Economy*. Lambert Academic Publishing.
13. Rama P Kanungo, Chris Rowley, and Anurag N. Banergee. 2018.*Changing the Indian Economy, Renewal, Reform and Revival*. copy right© Elsevier B.V.
14. Rabindra Kumar Misra. 2017. *Indian Economy: Past, Present and Future*. New Delhi: Avon Publications.
15. RBI *monthly bulletin*.
16. Government of India. *Economic Survey for various years*.
17. OECD *Economic Surveys-India*. 2017
18. Government of India. *NSSO reports-various rounds*. Ministry of Statistics and Programme Implementation
19. RBI.*Handbook of Statistics for various years*.

### Module-3

A profile of Kerala Economy since its formation –Model of Development –Structural changes in Kerala Economy – Demographic changes – ageing – health – migration –poverty-unemployment-transformation in labour culture –migrant labour in Kerala, social security of labour -Emerging issues– policies- land reforms -formation of SEZs--Kerala &WTO – Fisheries and Plantation sectors-land market in Kerala–People’s plan – role of Panchayat Raj – ICT and development-tourism-women empowerment-role of micro finance-Privatization and human capital formation- Kerala’s higher education- Environment Degradation- Fiscal Crisis.

### References/ Compulsory Readings

1. K.K George. 1993. *Limits to Kerala Model of Development: an analysis of fiscal crisis and its implications*. Trivandrum:CDS,
2. Gulati Leela.1993. *In the absence of their men: the impact of male migration on women*. Sage Publications.
3. Parayil, Govindan. 2000. *Kerala: The Development Experience: Reflections On Sustainability And Replicability*. Zed Books.
4. Frank, Richard and T.M.ThomasIssac.2000. *Local democracy and Development: people’s Plan for decentralized planning in Kerala*.

5. P. P. Pillai. 1994. *Kerala Economy Four Decades of Development*.
6. M A Oommen.1993.*Essays on Kerala Economy*. Oxford & IBH Publishing Company.
7. B A Prakash. 1994. *Kerala Economy Problems and Prospects*. New Delhi: Sage Publications.
8. B.A. Prakash and Jerry Alwin 2018.*Kerala's Economic Development Emerging Issue and Challenges*. New Delhi: Sage publications.

#### **Supplementary/suggested Readings**

1. B.A.Prakash.2012. *Indian Economy since 1991*. New Delhi: Dorling Kindersly.
2. Government of Kerala. *Economic Review for various years*.

Reg. No.....

Name.....

**FIRST SEMESTER M.A.DEGREE EXAMINATION**  
**ECONOMICS**  
**PAPER – I : EcC001: MICRO ECONOMIC THEORY I**  
**(CORE)**

Time: 3 Hours

Maximum marks: 60

## PART A (Short answers)

*Answer all questions.**Each question carries 2 mark*

1. Explain Comparative static analysis
2. Explain Preference towards risk
3. Explain Trade off between risk and return
4. Explain the methodology of micro economics
5. Explain uses of economic model
6. Discuss cobweb theorem
7. Explain bandwagon effect
8. Explain F-S hypothesis
9. What is St.Peter's berg paradox
10. Explain state preference theory

(10×2=20 marks)

## PART B (Short essay)

*Answer any four questions.**Each question carries 5 mark*

11. Solve the following linear programming problem graphically.

$$\text{Maximize } Z=60X_1+40X_2$$

$$\text{S.T } 2X_1+X_2\leq 60$$

$$X_1\leq 25$$

$$X_2\leq 35$$

$$X_1, X_2\geq 0$$

or

Discuss input output analysis

12. Derive habit creation principle

or

Explain Characteristics theory of demand

13. Discuss LES

or

Explain Features of Cobb-Douglas production function

14. Explain CES production function

or

Explain equilibrium of multi product firm

(4×5=20 marks)

PART C (Essay)

*Answer **any two** questions.*

*Each question carries **10** marks*

15. Critically evaluate Cournot duopoly model

or

Discuss forms of price leadership

16. Discuss non-collusive models of oligopoly

or

Explain market with asymmetric information

(2×10=20 marks)



Reg. No.....

Name.....

**FIRST SEMESTER M.A.DEGREE EXAMINATION**  
**ECONOMICS**  
**PAPER – II : EcC002: MACRO ECONOMIC THEORY I**  
**(CORE)**

Time: 3 Hours

Maximum marks: 60

## PART A (Short answers)

*Answer **all** questions.**Each question carries 2 mark*

1. Explain investment multiplier
2. Differentiate between new classical and new Keynesian economics
3. Explain the themes of classical economics
4. Differentiate between static and dynamic multiplier
5. Explain simple Keynesian model
6. Explain the types of multiplier
7. Explain the types of unemployment
8. Derive IS-LM model
9. Explain Keynesian income determination in four sector model
10. Explain three sector macro model

(10×2=20 marks)

## PART B (Short essay)

*Answer **any four** questions.**Each question carries 5 mark*

11. Explain Kuznet consumption puzzle

or

Explain Tobin's q-ratio

12. Explain accelerator theory of investment

or

Explain financial theory of investment

13. Discuss permanent income hypothesis

or

Critically evaluate relative income hypothesis

14. Explain the importance of consumption function

Or

Discuss absolute income hypothesis

(4×5=20 marks)

PART C (Essay)

*Answer **any two** questions.*

*Each question carries **10** marks*

15. Discuss the themes of monetarism

or

Explain Keynesian theory of demand for money

16. Critically evaluate real balance effect

or

Discuss post Keynesian theory of demand for money

(2×10=20 marks)

Reg. No.....

Name.....

**FIRST SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – III: EcC003: QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS  
(CORE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short Answers)

Answer all questions

Each question carries 2 marks

1. Distinguish between static and dynamic model
2. State any two properties of transpose of a matrix
3. Distinguish between discrete and continuous probability distribution
4. Distinguish between mutually like and equally likely events
5. Briefly explain the axiomatic approach to probability
6. Distinguish between MSC and MSE
7. Explain 80-20 rule
8. What do you mean by technology matrix
9. Distinguish between large and small sample
10. Give an example for Idempotent matrix

(10 x 2 = 20 Marks)

PART –B (Short Essay)

Answer any four questions

Each question carries 5 marks

11. Find the Binomial distribution whose mean is 6 and variance is 2

OR

Explain the uses of multinomial distribution

12. Distinguish between Z test and t test

OR

Explain the methods of Sampling

13. Two unbiased dice are thrown find the probability that

- a) Both the dice shows the same number
- b) Total of the number on the dice is greater than 10

OR

Apply Chi- Square and test the relationship between two attributes A and B at 5% significance level

Attributes	A1	A2
B1	40	25
B2	11	26

14. Find the Determinant of A

$$A = \begin{pmatrix} 2 & -1 & 2 & 1 \\ 1 & 0 & 3 & 2 \\ 4 & 1 & 2 & 0 \\ 5 & 1 & 0 & 1 \end{pmatrix}$$

OR

Explain the procedure of point and interval estimation

(4 x 5 = 20 Marks)

PART –C ( Essay)

Answer any two questions

Each question carries 10 marks

15. A factory has two machines. Past records show that machine I produces 30% of the items of output and machine II produces 70% of the item. Further 5% of the items produced by machine I were defective and only 1% produced by machine II were defective. If a defective item is drawn at random, what is the probability that the defective items were produced by machine I? Which principle was adopted for obtaining the probability?

OR

Discuss the salient features of Normal Distribution

16. Solve the Linear Equation by using Crammers Rule

$$3x + 3y - z = 11$$

$$2x - y + 2z = 9$$

$$4x + 3y + 2z = 25$$

OR

Construct an ANOVA table and state your conclusion using the following data and also Check is there any significant difference in items A, B and C

A	B	C
10	9	4
6	7	7
9	5	6

( 2 x 10 = 20 Marks)

Reg. No.....

Name.....

**FIRST SEMESTER M.A.DEGREE EXAMINATION**

**ECONOMICS**

**PAPER – IV : EcC004: DEVELOPMENT ISSUES OF INDIAN ECONOMY**

**(WITH SPECIAL REFERENCE TO KERALA)**

**(CORE)**

Time: 3 Hours

Maximum marks: 60

**PART A (Short answers)**

Answer all questions

Each question carries 2 mark

1. Inclusive Growth.
2. Terms of trade between agriculture and industry.
3. National Food Security Mission.
4. NREGP
5. Special Economic Zone.
6. People's plan
7. Women empowerment.
8. Ageing
9. Capital account convertibility.
10. NITY Aayog.

(10×2=20 marks)

**PART B (Short essay)**

Answer any four questions.

Each question carries 5 marks

11. Examine the population growth in India.

OR

Critically examine the Kerala Model of Development.

12. Explain the nature of migration in Kerala.

OR

State employment generation programme in India.

13. Explain the measurement poverty in India.

OR

State Sen's Capability approach on poverty.

14. Discuss the human capital formation in Kerala.

OR

Explain the gender discrimination in India.

(4×5=20 marks)

PART C (Essay)

Answer any two questions.

Each question carries 10 marks

15. State the demographic indicators and its performance in India.

OR

How does economic liberalization affect the development of Indian economy.

16. Explain the developments of ICT in Kerala.

OR

Examine the privatization strategy and its impacts on industrial development in India.

(2×10=20 marks)

**Appendix to U.O.No.Acad/C1/10376/2019 dated, 10.10.2019**

**MICROECONOMIC THEORY-II  
CORE COURSE  
COURSE CODE – EcC005**

**Objectives**

This course is intended to acquaint the student in decision making in the context of complexity, uncertainty; give insights into developments in the areas of general equilibrium and welfare economics; and to equip the students to apply micro economic principles in the areas of exchange and welfare.

**Outcome**

Develops skills in the context of managerial theories, game problems, distribution, and general equilibrium and welfare aspects.

**Module-1**

**Extension of the traditional theory of the firm:** Baumol's theory of sales revenue maximization – Marris' model of the managerial enterprise – Williamson's model of managerial discretion – behavioural model of Cyert and March – theory of games – decision theory.

**Theory of product pricing:** Basic assumptions underlying the traditional theory of pricing – Hall and Hitch report and the 'full cost' pricing principle – the mark-up rule – Bain's limit-pricing theory – Model of Sylos-Labini – Model of Franco Modigliani.

**References/ Compulsory Readings**

1. Gregory N. Mankiw. 2009. *Principles of Microeconomics*. South Western Cengage Learning.
2. Robert Y. Awh. 1976. *Microeconomics: Theory and Applications*. John Wiley and Sons.
3. James M. Henderson and Richard E. Quandt. 2003. *Microeconomic Theory: A Mathematical Approach*. New Delhi: Tata McGraw-Hill Publishing Co. Ltd.
4. George J. Stigler. 1996. *The Theory of Price*. Prentice Hall of India Pvt. Ltd.
5. Dominick Salvatore. 2003. *Microeconomics: Theory and Applications*. Oxford University Press.
6. Robert S. Pindyck and Daniel L. Rubinfeld. 2003. *Microeconomics*. Prentice Hall of India.
7. Koutsoyiannis A. 1979. *Modern Microeconomics*. Mac Millan.

**Supplementary/ Suggested Readings**

- Robert H. Frank. 2000. *Microeconomics and Behaviour*. Irwin Mc. Graw Hill.
- Donald Stevenson Watson and Malcolm Getz. 1996. *Price Theory and its Uses*. New Delhi: AITBS Publishers and Distributors.

**Module-2**

**Theory of distribution:** Neoclassical approach to distribution- Marginal productivity theory: Product exhaustion theorem: Euler's theorem and the 'adding up' controversy – Clark-Wicksteed-Walras product exhaustion theorem – Keynesian or Neo Keynesian theories of distribution or Alternative distribution theories:Kaldor- modified model of Pasinetti –Alternative widow's cruse models- Classical theory of distribution-The Ricardian model – Marxian theory –

Modern theory of distribution or post Keynesian theory of distribution- 'degree of monopoly' by Kalecki – theories of wage- theories of interest- theories of profit.

**General equilibrium:** Interdependence in the economy – partial and general equilibrium – Walrasian general equilibrium – two-factor, two-commodity, two-consumer general equilibrium model. – existence, uniqueness and stability of general equilibrium – Brouwer's fixed point theorem.

### References/ Compulsory Readings

1. Hal R. Varian. 2000. *Intermediate Microeconomics: A Modern Approach*. New Delhi: Affiliated East West Press.
2. Jack Hirshleifer, Amihai Glazer and David Hirshleifer. 2005. *Price Theory and Applications: Decisions, Markets and Information*. Cambridge University Press.
3. David M. Kreps. 2004. *Microeconomics for Managers*. London: W.W. Norton & Co.
4. William J. Baumol. 2000. *Economic Theory and Operations Analysis*. Prentice Hall of India Pvt.Ltd.
5. Walter Nicholson. 1992. *Microeconomic Theory: Basic Principles and Extensions*. Orlando: The Dryden Press.
6. H.A. John Green. 1976. *Consumer Theory*, Mac Millan.
7. Koutsoyiannis A. 1979. *Modern Microeconomics*, Mac Millan.
8. Dominick Salvatore. 2003. *Microeconomics: Theory and Applications*. Oxford University Press.
9. G. C. Da Costa. 1992. *Value and Distribution in Neoclassical and Classical Systems*. Himalaya Publishing House, Second Edition.

### Supplementary/ Suggested Readings

- Edwin Mansfield & Gary Yohe. 2004. *Microeconomics*. W.W.Norton & Co.
- John P. Gould, Edward P. Lazear. 2003. *Microeconomic Theory*. Richard D. Irwin Inc.

### Module-3

**Welfare economics:** Criteria of old social welfare economics-growth criteria-cardinalist criteria-Bentham's criteria- Pareto optimality- New welfare economics-Kaldor –Hicks compensation criteria-Scitovsky criteria-social welfare function- Bergson-Samuelson-Arrows impossibility theorem-Pigouvian welfare economics-point of bliss-theory of second best-Rawlsian concept of justice-Coase theorem

### References/ Compulsory Readings

1. David Laidler. 1981. *Introduction to Microeconomics*. New Delhi: Heritage Publishers.
2. David Begg, Stanley Fisher and Rudiger Dornbusch. 1994. *Economics*. Mc Graw-Hill Publishing Company.
3. Richard G. Lipsey and K. Alec Chrystal. 1999. *Principles of Economics*. Oxford University Press.
4. Hicks. 1956. *A Revision of Demand Theory*. Oxford University Press.



5. Koutsoyiannis A. 1979. *Modern Microeconomics*. Mac Millan.
6. Robert S. Pindyck and Daniel L. Rubinfeld. 2003. *Microeconomics*. Prentice Hall of India.

### **Supplementary/ Suggested Readings**

- Robert H. Frank. 2000. *Microeconomics and Behaviour*. Irwin Mc. Graw Hill.
- Donald Stevenson Watson and Malcolm Getz. 1996. *Price Theory and its Uses*. New Delhi: AITBS Publishers and Distributors.
- Gravelle. A and R. Rees. 2004. *Microeconomics*. Singapore: Pearson Education Pvt. Ltd.

**MACRO ECONOMIC THEORY – II**  
**CORE COURSE**  
**COURSE CODE – EcC006**

**Objectives**

This course aims at students to gain strong fundamentals of macro economy theories policies and models in a historical prospective. The paper examines the basic principles underling the functioning of an economy and deals with the determination of major macroeconomic aggregates.

**Outcome**

To make students to understand roll of expectation uncertainty and the relationship between inflation and employment by providing exposure to the contributions of Friedman and Phelps and Phillips. Also understanding the developments of macro economics.

**Module-1:**

**Macro Economics in an Open Economy :** ISLM Analysis in an open economy – Foreign Exchange Market – Determination of Exchange Rates: Fixed Vs Flexible – Pegging of the currency – Balance of Payment/ Accounts – Disequilibrium in BOP – Depreciation, Appreciation, Revaluation, Devaluation, J-curve Effect – BOP in Keynesian Analysis – Exchange Rates – Money and Capital Flows in an Open Economy – Mundell Fleming-Keynesian Model – Monetary and Elasticity Approach to Balance of Payments.

**References/ Compulsory Readings**

1. Ackley G. 1978. *Macro Economics; Theory and Policy*. New York: Macmillan.
2. Andrew B. Paul and Ben S Bernanke. *Macro Economics*. New Delhi: Pearson Education.
3. Culbertson J. M. *Macro Economic Theory and Stabilisation Policy*. Tokyo: McGraw Hill.
4. Dasgupta. A. K. and Hagger, A. J. 1971. *The Objectives of Macro Economic Policy*. London: Macmillan.
5. Denberg and Thomas. F. 1985. *Macroeconomics: Concepts, Theories and Policies*. New York: McGraw-Hill.
6. Eugene Diulio. *Theory and Problems of Macro Economics*. Singapore: Schaum's Outline Series, McGraw Hill Publishing Company.
7. Rosalind Levacic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.
8. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.

**Supplementary/ Suggested Readings**

- Rudiger Dornbusch, Stanley Fischer and Richard Startz. 1998. *Macro Economics*. New Delhi: Tata McGraw Hill Publishing Company Ltd.
  - Snowdown B, H.R Vane and F. Wyncarczyk. *A Modern Guide to Macro Economics: An introduction to competing schools of thought* .

**Module-2:**

**Theory of Inflation and Unemployment :** Keynesian and Monetarist Approach to Inflation – Structuralist Theory of Inflation – Phillips Curve – Short run, Long run Phillips Curve – The

Natural Rate of Unemployment Hypothesis – Modified Phillips Curve – Adaptive Expectation Hypothesis – Augmented Phillips Curve – Cost of Inflation and Inflation Targeting – Unemployment and Labour Market – Under Employment Equilibrium.

### References/ Compulsory Readings

1. Friedman, M. *Studies in the Quantity Theory of Money*. Chicago: The University of Chicago Press.
2. Gordon R. and S.G. Harris. *Macro Economics*. Massachusetts: Addison Wesley.
3. Keynes. J. M. 1961. *The General Theory of Employment, Interest and Money*. London: Macmillan.
4. Mankiw N. G. *Macro Economics* .
5. Piston. M. H. 1974. *Theory of Macroeconomic Policy*. Philip Allen, Oxford.
6. Prachowney and Martin F. J. 1994. *The Goals of Macroeconomic Policy*. London: Routledge.
7. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.
8. Rosalind Levacic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.

### Supplementary/ Suggested Readings

- Rudiger Dornbusch, Stanley Fischer and Richard Startz. 1998. *Macro Economics*. New Delhi: Tata McGraw Hill Publishing Company Ltd.

### Module-3:

**Current Controversies in Macro Economics :** Keynesian Counter revolution – Dual Decision Hypothesis, Walrasian General Equilibrium – Neo-Keynesian Quantity Constrained Model – Rational Expectations – New Classical Macro Economics – Supply side Economics - Business cycles- measurement- endogeneous theories (Hicks, Goodwin, Kaldor)- exogeneous theories- Real Business Cycle Approach – financial cycles (Minsky)- growth cycles-New Keynesian Economics

**Macro Economic Policy:** Objectives of Macro Economic Policies – Target Variable and Instrument variable –Main Policy Instrument – Monetary Policy Vs Fiscal Policy- Okun’s Law – Budget Deficit – debt dynamics-Domar instability condition- Ricardian equivalence- monetarisation of the debt- contemporary macroeconomic debates in India and the world- Crowding out Effect and Government Budget – Income Policy – Stabilisation Policy – New Cambridge Approach.

### References/ Compulsory Readings

1. Rosalind Levacic and Alexander Rebmann. *Macro Economics: An Introduction to Keynesian Neoclassical Controversies*. London: The Macmillan Press Ltd.
2. Rudiger Dornbusch, Stanley Fischer and Richard Startz. 1998. *Macro Economics*. New Delhi: Tata McGraw Hill Publishing Company Ltd.
3. Salvatore. D. 1990. *Macro Economics*. New York: Macmillan.
4. Shapiro. E. 1994. *Macroeconomic Analysis*. New Delhi: Galgotia Publications.

5. Sodersten. B. *Macro Economics*, New York: Macmillan.
6. Richard T Froyen. 1990. *Macro Economics; Theory and Policy*. New York: Macmillan Publishing Co.

**Supplementary/ Suggested Readings**

- Snowdown B, H.R Vane and F. Wyneczyk. *A Modern Guide to Macro Economics: An introduction to competing schools of thought*.
- Y. P. Venieries and F. D. Sebold. *Macro Economic Models and Policy* .

**ECONOMETRICS  
CORE COURSE  
COURSE CODE – EcC007**

**Course Objectives**

This course helps the students to develop the analytical and empirical skills necessary to understand the formulation of economic theory and also enable them to formally represent economic relationships using mathematical and econometric tools and provide meaningful verbal interpretations of these representations. Students will be able to analyze empirically economic relationships using simple, multiple regression, or simultaneous equation techniques. This course enables the students to develop the analytical and empirical skills related to use of dummy variables and lag variables and solution to various econometric issues arising at the time of estimation.

**Course Outcome**

Students will gain knowledge about advanced econometric methods that are commonly used in applied economic analysis particularly on application and interpretation of models and methods.

**Module 1**

Definition and scope of Econometrics - methodology of econometrics- two variable regression analysis- estimation and testing - multiple regression analysis : estimation and testing - Violation of assumptions of CLRM- Seemingly unrelated regression (SUR) model- Recursive equation system- Simultaneous equation model-Identification; Estimation.

**References/Compulsory Readings**

- Klien L.R.. *Introduction to Econometrics*. New Jersey: Prentice Hall Inc. Englewood Cliffs.
- Damodar N. Gujarati.1992. *Essentials of Econometrics*. McGraw Hill.
- Damodar N. Gujarati.2000. *Econometrics*.

**Supplementary/suggested Readings**

- G. M. K Madnani. *Introduction to Econometrics: Principles and Applications*. Oxford and IBM Publishing Company.
- Wooldridge, Jeffrey M. 2003. *Introductory Econometrics: A Modern Approach*, Second Edition. USA: Thomson South Western.

**Module – II**

Dummy variables- Use of dummy variables- Regression on dummy variables dummy variable trap – Dummy dependent variable models- LPM, Logit, Probit, Tobit Models - Errors in variables – Instrument variables-Lagged variables - Regression with Lagged Variables – Distributed Lag Models.

### References/Compulsory Readings

1. Damodar N. Gujarati 1995. *Basic Econometrics*. McGraw Hill.
2. Michael D. Intriligator. 1980. *Econometric Models, Techniques and Applications*, New Delhi: Prentice Hall of India.
3. A. Koutsoyiannis. 2004. *Theory of Econometrics*. Palgrave.
4. Greene, W. 2008. *Econometrics Analysis*. Pearson.
5. Johnston, J. and John DiNardo, 1997. *Econometric Methods*. 4th Edition, London: McGraw-Hill Companies Inc.

### Supplementary/suggested Readings

- Pindyck, Robert S. and Daniel L. Rubinfeld .1995. *Econometric Models and Economic Forecasts*. 4th Edition New York: Irwin McGraw-Hill.
- Ramanathan, Ramu .2000. *Introductory Econometrics with Applications*. 5th Edition. New Delhi: Cengage Learning India Pvt. Ltd.

### Module – III

Time Series Analysis: Stationarity; Autocorrelations and Partial Autocorrelation Functions; Unit roots and Units roots tests; ARIMA modeling; ARCH/GARCH models; VAR models; Co-integration: Engle-Granger and Johansen procedures; ARDL model. Models for Panel Data: Fixed Effects and Random Effects method; Dynamic Panel Data models.

### References/Compulsory Readings

- Johnston. J. 1972. *Econometric Methods*. New York: McGraw Hill Book Company.
- Klien L.R. A. 1974. *Text Book of Econometrics*. New Jersey: Prentice Hall Inc. Englewood Cliffs.
- Maddalla G.S. 1977. *Econometrics*. New York: McGraw Hill.
- Desai, Meghand. 1976. *Applied Econometrics*. New York: McGraw Hill Book Co.
- Baltagi, B. H. 2008. *Econometric Analysis of Panel Data*. 4th edition, John Wiley.
- Enders, Walter .2009. *Applied Econometric Time Series*. 3rd Edition, Wiley
- Everitt, Brian S and Dunn, Graham. 2001. *Applied Multivariate Data Analysis*. Second Edition. Arnold.

### Supplementary/suggested Readings

1. Thomas, R.L .1993. *Introductory Econometrics: Theory and Applications*. London : Longman.
2. Patterson, Kerry .2001. *An Introduction to Applied Econometrics – A Time Series Approach*. London: MacMillan Press Ltd.

**FINANCIAL INSTITUTION AND MARKETS**  
**CORE COURSE**  
**COURSE CODE: EcC008**

**Objectives**

The course provides an overview of financial system, structure and its role, conceptual idea on financial development, relation between financial system and economic development, functions, components and developments of financial markets, structure and growth of non-banking financial institutions, innovations and developments of financial services and instruments and knowledge on global financial markets.

**Outcome**

The course helps the students to understand the financial system and its role in economic development. The students acquire a comprehensive knowledge about the role of financial market in investment decisions in stock markets and create an ability to make security analysis and promote them to make better investment decision for the development of the economy.

**Module I**

**Financial system**-structure, nature and role of financial system-classification of financial institutions- financial system and Economic development- indicators of financial development-criteria to evaluate a financial system- concepts of financial development -financial innovation-financial engineering-financial revolutions –diversifications- disintermediation- financial repression- prudential regulation- internationalization and globalization-securitization.

**References/ Compulsory Readings.**

1. L.M.Bhole. 2007. *Financial institutions and Markets*. New Delhi: McGraw Hill company.
2. L M Bhole and Jitendra Mahakud. 2017. *Financial institutions and Markets*. New Delhi: McGraw Hill Education Private Ltd.
3. M.Y Ghan. 2008. *Indian Financial system*. New Delhi: McGraw Hill company.
4. Meir Kohn. 2007. *Financial institutions and Markets*. UK: Tata Mc GRaw Hill.
5. S Guruswamy. 2009. *Financial Institutions and markets*. UK: Tata McGraw Hill.
6. Rajesh Chakravarty. 2009. *The financial sector in India*. Oxford.
7. Pallale V Bharati. 2012. *Indian Financial system*. New Delhi: Pearson.
8. Meir Kohn. 2017. *Financial Institutions and Market*. New York: Oxford University Press.
9. Niti Bhasin. 2017. *70 years of Banking system in India*. New Century publication.
10. *Trends and Progress of Banking India*, RBI various issues

**Supplementary/suggested Readings**

- Rajesh Chakra Bharthi. 2006. *The Financial Sector in India: Emerging Issues*. New Delhi: Oxford University Press.
- Mohanan S and Benson Kunjuu Kunju. 2012. *Financial Markets and Financial Services in India*. New Delhi: New Century Publication.
- Bhavesh Bhatt. 2013. *Financial Economics*. Vista Publication.
- Machiraju H.R. 2018. *Indian Financial System*. Vikas Publishing Ltd.

## Module II

**Financial market**-meaning-classifications-money market-objectives – functions-importance-components-call money market-treasury bill market-commercial bill market-certificate of deposit Market- bond market, stock market, derivatives market Acceptance Market-collateral loan Market-Capital market- objectives-functions-importance-structure-primary and secondary market-stock exchange-meaning and functions-SEBI.

### References/ Compulsory Readings.

1. L.M.Bhole. 2007. *Financial institutions and Markets*. New Delhi: McGraw Hill company.
2. L M Bhole and Jitendra Mahakud. 2017. *Financial institutions and Markets*. New Delhi: McGraw Hill Education Private Ltd.
3. M.Y Ghan. 2008. *Indian Financial system*. New Delhi: McGraw Hill company.
4. Meir Kohn. 2007. *Financial institutions and Markets*. UK: Tata Mc GRaw Hill.
5. S Guruswamy. 2009. *Financial Institutions and markets*. UK: Tata McGraw Hill.
6. Meir Kohn. 2017.*Financial Institutions and Market*. NewYork: Oxford University Press.

### Supplementary/suggested Readings

1. Avadhani V A. 2003. *Investment and Securities Markets of India*. Himalaya Publishing House.
2. Thomas, Susan. 2003. *Derivatives Markets in India*.Tata McGraw-Hill.
3. RBI Bulletin. *CMIE Reports*. Prime Data Base. sebi.com, nseindia.com, bseindia.com.
4. R.E.Bailey. 2005. *The Economics of Financial Markets*. New York: Cambridge Private Ltd.
5. Mohanan S and Benson Kunjuu Kunju. 2012. *Financial Markets and Financial Services in India*. New Delhi: New Century Publication.
6. Bhavesh Bhatt. 2013. *Financial Economics*. Vista Publication.
7. H.R.Machiraju.2018. *Indian Financial System*. Vikas Publishing Ltd.

## Module III

Non-Banking Financial Intermediaries- insurance companies-miscellaneous NBFIs –structure and growth-role and functions-Hire purchase-lease finance-Housing finance-Merchant Banking-venture capital- mutual funds –credit rating agencies-debt securitization –disinvestment-insider rating-corporate restructuring. Global Financial markets- global innovative instruments-global foreign exchange market-global banking-offshore banking - -global equity market and major global financial market- new generation banks- Digital technology in banking sector- - internet banking-Mobile banking- digitization of financial services-RTGS-NEFT-CFMS-CTS-MICR-speed clearance-E wallet- plastic money- its merits and demerits.



### References/ Compulsory Readings

1. L.M.Bhole. 2007. *Financial institutions and Markets*. New Delhi: McGraw Hill company.
2. L M Bhole and Jitendra Mahakud. 2017. *Financial institutions and Markets*. New Delhi: McGraw Hill Education Private Ltd.
3. M.Y Ghan. 2008. *Indian Financial system*. New Delhi: McGraw Hill company.
4. Hazel J Johnson. 2000. *Global financial institutions and Markets*. UK: Mc Graw Hill company.
5. Meir Kohn. 2007. *Financial institutions and Markets*. UK: Tata Mc GRaw Hill.
6. S Guruswamy. 2009. *Financial Institutions and markets*. UK: Tata McGraw Hill.
7. Rajesh Chakravarty. 2009. *The financial sector in India*. Oxford.
8. Pallale V Bharati. 2012. *Indian Financial system*. New Delhi: Pearson.
9. Meir Kohn. 2017. *Financial Institutions and Market*. New York: Oxford University.
10. Siddaih Thumnulari. 2016. *Financial services*. Pearson.

### Supplementary/suggested Readings

1. Avadhani V A. 2003. *Investment and Securities Markets of India*. Himalaya Publishing House.
2. Thomas, Susan . 2003. *Derivatives Markets in India*. Tata McGraw-Hill.
3. Ramesh Babu G. 2005. *Financial services in India*. Concept publishing Company Ltd.
4. Mohanan S and Benson Kunjuu Kunju. 2012. *Financial Markets and Financial Services in India*. New Delhi: New Century Publication.
5. Bhavesh Bhatt. 2013. *Financial Economics*. Vista Publication.
6. H.R. Machiraju . 2018. *Indian Financial System*. Vikas Publishing Ltd.

**INTERNATIONAL ECONOMICS  
CORE COURSE  
COURSE CODE: EcC009**

**Objectives**

The course covers the pure theories of international trade, modern theories, new theories of trade, forms and effects of commercial policies, balance of payment, foreign exchange rate, debt, investment and trade problems of less developed countries and international economic organizations and world trade system.

**Outcome**

The course provides the student a grounding in the basis of international trade, international payment system, international trade position of India and impact of trade policies followed both at the national and international level.

**Module I: International Trade and Economic Development: Theories**

International Trade and Economic Development- Pure Theory of International Trade –Theories of Absolute Cost Advantage and Comparative Cost Advantage – Opportunity cost approach – offer curves- Reciprocal demand theory- Specific factor model –Specific factors and income distribution – H.O.Model - Empirical Testing of H.O Theorem- Leontief Paradox – Factor intensity reversal –Factor price equalization theorem \_Rybczynski Theorem –Terms of trade. New theories of International trade –Kravis-Linder-Posner-Vernon-Kenen-Emmanuel and Krugman-Trade based on product differentiation – Intra industry trade –Empirical test on Intra industry trade-Monopolistic Competition and international trade. Technology differences and trade -Theory of Immiserising Growth -Prebisch Singer model-Application to developing economies.

**References/ Compulsory Readings**

1. Paul R Krugman and Maurice Obstfeld. 2003. *International Economics, Theory and Practice*. Singapore: Pearson Education.
2. B O Sodersten and Geoffrey Reed. 2003.*International Economics*. London: Macmillan.
3. Dominic Salvatore. 2003. *International Economics*. New York: John Wilkey& Sons.
4. Francis Cherunilam. 2000. *International Economics*. TMH.
5. Sugata Margit. 2008. *International Trade and Economic Development*. Oxford University Press.
6. Chacoliades. 1978.*International trade, Theory and Policy*. McGraw Mills.
7. Kindleberger C.B. *International Economics*. Bombay: Taraporewala and Sons.
8. Deepak Nayyar. 1997. *Trade and Industrialisation*. Oxford University Press.
9. JagdishBhagavathi.*Writings on International Economics*. (ed) Balasubramanyam. Oxford University Press.
10. G.M.Meier. 1968. *International Economics of Development*. New York: Harper and Row.
11. P.K.Bardhan .1970.*Economic Growth Development and Foreign Trade*. New York: Wilet.

### Supplementary/suggested Readings

1. W.M. Corden . 1965. *Recent developments in the theory of international trade*. Princeton: Princeton University press.
2. K.C Rana and K.N Verma. 2012. *International Economics*. Vishal publishing Co.
3. Paul. R. Krugman and Maurice Obstfeld. 2009. *International Economics*. Pearson Education. Dorling Kindersley (India) Pvt. Ltd.
4. *Indian Economic Journal* (various issues on special number in International Economics)

### Module II Commercial Policies and Foreign Trade

Commercial policies of trade- case of free trade and protection – Trade restriction –Tariff and non trade barriers – effects of tariff –partial and general equilibrium Analysis – Small Country and large country cases-Effective Rate of Protection — Optimum Tariff – Tariff and real reward for factors – Stolper Samuelson Theorem – Metzler paradox, Lerner symmetry theorem- effects of import quotas and other non-tariff barriers on trade-Economic integration-Forms of economic integration-Preferential Trading Agreement-Free Trade Area-Common market-Economic union-customs union- Monetary Union-Effects of custom union-Partial and General equilibrium analysis- -Balance of payment and trade-exchange depreciation and devaluation – Foreign Trade Multiplier-Theories of Balance of Payment-The elasticity approach- The Marshall Lerner Mechanism. The absorption approach-The monetary approach- Foreign exchange rate policy - Fixed and Flexible exchanges-Exchange rate regimes. India's foreign trade and balance of payments.

### References/ Compulsory Readings

1. Paul R Krugman and Maurice Obstfeld. 2003. *International Economics. Theory and Practice*. Singapore: Pearson Education.
2. B O Sodersten and Geoffrey Reed. 2003. *International Economics*. London: Macmillan.
3. Dominic Salvatore. 2003. *International Economics*. New York: John Wilkey& Sons.
4. Francis Cherunilam. 2000. *International Economics*. TMH.
5. Sugata Margit. 2008. *International Trade and Economic Development*. Oxford University Press.
6. Chacoliades. 1978. *International trade, Theory and Policy*. McGraw Mills.
7. C.B.Kindleberger. *International Economics*. Bombay: Taraporewala and Sons.
8. Deepak Nayyar. 1997. *Trade and Industrialisation*. Oxford University Press.
9. JagadishBhagavathi. *Writings on International Economics* (ed) Balasubramanyam. Oxford University Press.
10. G.M.Meier. 1968. *International Economics of Development*. New York: Harper and Row.
11. P.K.Bardhan.1970.*Economic Growth Development and Foreign Trade*.New York: Wilet.
12. JagadishBhagavathi and Ronald W.Jones.1973. *Trade, Balance of Payments and Growth*. North Holland Nayyar.

### Supplementary/suggested Readings

1. W.M.Corden . 1965. *Recent developments in the theory of international trade*. Princeton: Princeton University press.
2. K.C Rana and K.N Verma. 2012. *International Economics*. Vishal publishing Co.
3. Paul. R. Krugman and Maurice Obstfeld. 2009. *International Economics*. Pearson Education. Dorling Kindersley (India) Pvt. Ltd.
4. *Indian Economic Journal* (various issues on special number in International Economics)

### Module III

Trade as an engine of growth – Export promotion Vs import substitution strategies – Problems facing developing economies –borrowing and debt problems – MNCs and direct investment-. Globalization-International economic organizations and World Trade System : IMF, IBRD, IFC, IDA, ADB, UNCTAD, UNIDO and WTO-Integration among developing countries- SAARC and ASEAN

### References/ Compulsory Readings

1. Paul R Krugman and Maurice Obstfeld. 2003. *International Economics*. Theory and Practice. Singapore: Pearson Education.
2. B O Sodersten and Geoffrey Reed. 2003. *International Economics*. London: Macmillan.
3. Dominic Salvatore. 2003. *International Economics*. New York: John Wilkey& Sons.
4. Francis Cherunilam. 2000. *International Economics*. TMH.
5. Sugata Margit. 2008. *International Trade and Economic Development*. Oxford University Press.
6. Chacoliades. 1978. *International trade, Theory and Policy*. McGraw Mills.
7. C.B.Kindleberger. *International Economics*. Bombay: Taraporewala and Sons.
8. Deepak Nayyar. 1997. *Trade and Industrialisation*. Oxford University Press.
9. JagadishBhagavathi. *Writings on International Economics* (ed) Balasubramanyam. Oxford University Press.
10. Meier G.M. 1968. *International Economics of Development*. New York: Harper and Row.
11. P.K.Bardhan.1970.*Economic Growth Development and Foreign Trade*. New York: Wilet.
12. R.A.Mundell. 1962. *The Appropriate Use of Fiscal and Monetary Policy for International External Stability, IMF*. Staff Papers.
13. W. Scammel. 1975.*International Policy: Brettonwoods and After*. London: Macmillan.
14. F. Machlup. 1970.*International Monetary Economics*. London: George Alien and Unwin.
15. Evan Luard. 1983. *The Management of the World Economy*. London: Macmillan.
16. M.R. Aggarval. *International Institutions and Economic Development of Underdeveloped Countries*. Indian Economic Association,

17. Nagesh Kumar. *Foreign Direct Investment and the WTO*. OIP.
18. Robert J Carbouhh. 2004. *International Economics*. Thomson South Western Edition.

**Supplementary/suggested Readings**

1. W.M.Corden. 1965. *Recent developments in the theory of international trade*. Princeton: Princeton University press..
2. K.C Rana and K.N Verma. 2012. *International Economics*. Vishal publishing Co.
3. *Indian Economic Journal* (various issues on special number in International Economics)

**ENVIRONMENTAL ECONOMICS**  
**CORE COURSE**  
**COURSE CODE: EcC010**

**Objectives**

The objective of the course is to alert the concerns about the burgeoning environmental pollution, depletion of vast natural resources and the severe threats that face in the sustainability as part of development programmes. It also familiarizes the environmental impact assessment tools and techniques. The paper provides about major natural disasters and a sustainable approach to fight against these disasters and provides better understandings of biodiversity and markets for natural resources.

**Outcome**

The paper enables the students in acquiring the basic skills and knowledge required in the natural resource management of a country for a sustainable existence.

**Module I**

The Economy and environment – inter linkages between the economy and environment- material balance model and the law of thermo dynamics- environmental ethics-resource taxonomy economics of natural resources –managing renewable and non renewable resources- Economics of sustainable development- key aspects of sustainable development-indicators of sustainability- approaches to sustainable development-Hart wick, Solow approach, safe minimum standard- Daly’s operational principle- water conservation, rainwater harvesting and watershed management –water resources in India- issues and concerns.

**References/Compulsory Readings**

1. Tom, Tietan Berg. 2004. *Environmental and Natural resource Economics*. Pearson.
2. Prakash, Vohra, and Ragesh, Mehta. 2007. *Environmental Economics*. New Delhi: Common wealth publishers.
3. Charles, D Kolstad. 2000. *Environmental Economics*. Oxford University Press.
4. Nick, Hanley, Jason, F Shogren and Ben, White. 2002. *Environmental Economics in Theory and Practice*. Newyork: Palgrave
5. Eban, S Goodstein. 2002. *Economics and the environment*. John wiley and sons.
6. Misra, SP, and Pandey, S N. 2009. *Essential Environmental Studies*. Ane Book Pvt.Ltd

**Supplementary/suggested Readings**

- Barbier, Edward B. *The Economics of Environment and Development*. Selected Essays, Edward Elgar, Cheltenham

- Tom, Tietenberg. *Environmental and Natural Resource Economics*. New York: HarperCollins Publishers.
- Ian, Goldin, and L, Alan Winters. *The Economics of Sustainable Development*, New York: Cambridge University Press

## Module II

Climate change and Agriculture development –climate change- issues and sustainable approach- Disaster management –major disasters-floods, earthquakes, cyclones, landslides-mitigation measures. Environment Impact Assessment (EIA)-Environmental Planning and Management- Biodiversity-magnitude and levels- value of bio diversity and threats to biodiversity- Methods of economic valuation of environment- market based methods-surrogate market methods- simulated market methods- Limitations of environmental valuations.

## References/Compulsory Readings

1. Tom, Tietan Berg. 2004. *Environmental and Natural resource Economics*. Pearson.
2. Aravindkumar. 2004. *Environment and Health*. New Delhi :APH Publishing Company.
3. Prakash, Vohra, and Ragesh, Mehta. 2007. *Environmental Economics*. New Delhi: Common wealth publishers.
4. Misra, SP, and Pandey, S N. 2009. *Essential Environmental Studies*. Ane Book Pvt.Ltd
5. Saxeena, H M. 2006. *Environmental Studies*. RawatPubliations.
6. Eban, S Goodstein. 2002. *Economics and the environment*. John wiley and sons.
7. Nick, Hanley, Jason, F Shogren and Ben, White. 2002. *Environmental Economics in Theory and Practice*. Newyork: Palgrave

## Supplementary/suggested Readings

- David, Pearce, and Dominic, Moran. *The Economic Value of Biodiversity*, London: Earth Scan Publications Ltd.
- Sterner, and Coria. 2011. *Policy Instruments for Environmental and Resource Management*. Francis and Taylor.

## Module III

Market failure and environmental goods-approaches and causes of market failure- market failure and externality- attributes of externality- internalizing externalities, coase theorem-environment as public good-private good- -impure public goods-tragedy of commons-property rights- Instrument for environmental protection- command and control, market based new tools- education, information and voluntary measures-Direct Economic instruments-Pollution fee and polluter pay principle, emission trading rights or tradable market permits, Deposit refund system, performance based , liability- Indirect economic instruments-taxes and subsidies etc.

**References/Compulsory Readings**

1. Subashini, Muthukrishanan. 2015. *Environmental Economics*, PHI learning Pvt.Ltd.
2. Tom, Tietan Berg. 2004. *Environmental and Natural resource Economics*. Pearson.
3. Prakash, Vohra, and Ragesh, Mehta. 2007. *Environmental Economics*. New Delhi: Common wealth publishers.
4. Nick, Hanley, Jason, F Shogren and Ben, White. 2002. *Environmental Economics in Theory and Practice*. Newyork: Palgrave
5. Misra, SP, and Pandey, S N. 2009. *Essential Environmental Studies*. Ane Book Pvt.Ltd
6. Russel, S, Clifford. 2001. *Applying Economics to environment*. Oxford University Press.
7. Charles, D Kolstad. 2000. *Environmental Economics*. Oxford University Press.

**Supplementary/suggested Readings**

- Barbier, Edward B. *The Economics of Environment and Development*. Selected Essays, Edward Elgar, Cheltenham.
- Sterner, and Coria. 2011. *Policy Instruments for Environmental and Resource Management*. Francis and Taylor.



**RESEARCH METHODOLOGY  
CORE COURSE  
COURSE CODE: EcC011**

**Objectives**

The course aims to provide the students the fundamental edifice of social science research with broad spectrum of knowledge about the research process. The paper generate the capability and skill on the part of students to prepare independent research project proposals which enable them to undertake research studies in future and improve their academic skills and expertise by involving in research activities.

**Outcome**

The paper generates the capability and skill of the students on proper methodological foundations of social research. It also focus skill development to collect data ,analyze and interpret it by using appropriate methods, tools and techniques and derive conclusions and policy implications on topics of societal relevance and economic significance.

**Module I**

Meaning of research-type of research-applied and fundamental-analytical and descriptive-qualitative and quantitative-conceptual and empirical-research methods and research methodology-approaches in social research- inductive and deductive methods--interpretive research-Qualitative and content analysis-ethnography and phenomenology-interdisciplinary research-objectivity and ethics in social science research.

**References/ Compulsory Readings**

1. Deepak, Chawla, and Neenasondhi. 2016. *Research Methodology Concepts and Cases*. Noida: Vikas Publishing House Ltd.
2. Sharlene, Nagy HesseBiber. *The practice of qualitative research*. London: Sage Publishers
3. Howard, Lane, Bruce L Berg. *Qualitative Research Methods for social research*. Pearson.
4. Ranjith, Kumar. 2014. *Research Methodology A step by Step guide*, London: Sage Publishers.
5. Kothari, C R. 1990. *Research Methodology, Methods and Techniques*. New Delhi: Wiley Eastern Ltd.

**Supplementary/suggested Readings**

- Wilkinson, and Bhandarkar. 2002. *Methodology and Techniques of Social Research*. Himalaya Publishers
- Laxmi, Devi. 1997. *Encyclopedia of Social Science Research*. Anmol Publications.

## Module II

Selection and formulation of research problem-development of research hypothesis-survey of literature-research design-meaning and contents- types of research design-exploratory and formulative, descriptive and diagnostic, evaluation and experimental, historical and survey design-steps in the research process- Sample Selection-sampling methods-random, stratified, multistage, systematic, cluster, quota, judgement, convenient, purposive samples.

### References/ Compulsory Readings

1. Francis, C Dane. *Evaluating Research methodology for people who need to Read Research*. London: Sage Publishers
2. Deepak, Chawla, and Neenasondhi. 2016. *Research Methodology Concepts and Cases*. Noida: Vikas Publishing House Ltd
3. Howard, Lane, Bruce L Berg. *Qualitative Research Methods for social research*. Pearson.
4. Goode, W J, and P F Hatt. 1952. *Methods in social Research*. New York: McGraw hill Book Company.
5. Kothari, C R. 1990. *Research Methodology, Methods and Techniques*. New Delhi: Wiley Eastern Ltd.
6. Young, Pauline. 1988. *Scientific social surveys and research*, New Delhi: Prentice Hall India Pvt.Ltd.
7. Estelle, M Philipps, and D S, Pugh. 1993 *How to get a Ph.D*. New Delhi: UBS publishers and Distributors Ltd.

### Supplementary/suggested Readings

- William, J Goode, and Paul, K Hatt.1981. *Methods in social Research*, McGraw- Hill.
- Wilkinson, and Bhandarkar. 2002. *Methodology and Techniques of Social Research*. Himalaya Publishers
- W Lawrence, Neuman. 2006. *Social Research Methods- Quantitative and Qualitative Approaches*. Pearson.

## Module III

Methods of data collection- sources of data- primary and secondary data- qualitative method of data collection- observation method—focus group method- case study method - personal interview method and projective techniques - secondary data collection method-benefits and drawbacks- sample survey- methods- interview methods- questionnaire method- constructing of questionnaire/interview schedule- criteria for questionnaire designing- physical characteristics of questionnaire- data analysis and techniques- hypothesis and testing- scaling- problems and techniques- writing of report-references and bibliography.

### References/ Compulsory Readings

1. Ranjith, Kumar. 2014. *Research Methodology A step by Step guide*, London: Sage Publishers.
2. Deepak, Chawla, and Neenasondhi. 2016. *Research Methodology Concepts and Cases*. Noida: Vikas Publishing House Ltd.
3. Kothari, C R. 1990. *Research Methodology, Methods and Techniques*. New Delhi: Wiley Eastern Ltd.
4. Young, Pauline. 1988. *Scientific social surveys and research*, New Delhi: Prentice Hall India Pvt.Ltd.
5. Estelle, M Philipps, and D S, Pugh. 1993 *How to get a Ph.D.* New Delhi: UBS publishers and Distributors Ltd.
6. Constantinos, N Phellas, Alice, Bloch, and Clive, Seale. *Structured methods, interviews, questionnaires and observation*.
7. Sharma, KVS. 2001. *Statistics made simple: Do it yourself*. Prentice Hall India Private Ltd.
8. G B, Singh. 2017. *Research Methodology with SPSS*. Jaipur: Paradise publishers.

### Supplementary/suggested Readings

- *The MLA Handbook for Writers of Association of America*. 2009.
- W Lawrence, Neuman. 2006. *Social Research Methods- Quantitative and Qualitative Approaches*. Pearson.
- Marc, Blaug. *The Methodology of Economics or How Economics Explain*. Cambridge University.
- PS, Mohanakumar. 1998. *A Handbook on Research Methodology*. Kudavechoor : Right Publishers.

**PUBLIC ECONOMICS  
ELECTIVE COURSE  
COURSE CODE – EcE001**

**Objectives**

The learning objective of this paper is to impart to the students a thorough understanding of dynamic role of Government in the economy, private and public goods, pure and impure public goods, theoretical knowledge on optimal allocation, distribution of public goods and public choice revelation, emerging trends and theoretical knowledge on public expenditure, revenue and debt, privatization and disinvestment of public sector units in India, criteria for public investment, budgeting, and emerging key issues centering around fiscal, federal and local financial relations in India.

**Outcome**

The course helps the students to understand the role of Government, optimal allocation, distribution of public goods and public choice revelation, need and emerging key issues centering around fiscal, federal and local financial relations of Government in India.

**MODULE. 1:**

**The Case for a Public Sector, Resource allocation in Public and Private goods and Public Choice Revelation**

The case for a public sector- The dynamics of the of government in a capitalist economy and Mixed economy- Public and Private goods-Market failures due to market imperfections, decreasing cost, externalities, uncertainty - Multiple Theory of Public Household- Provision of Public Goods: characteristics of public goods, the optimal provision of pure public goods, impure public goods( congested public goods) theory of Clubs, Local public goods (Tiebout Model), Public intermediate goods, Mixed goods/ quasi public goods, Merit wants and merit goods- Theories of Public Goods Allocation -Public Choice Theory: Private and public mechanism for allocating resources – The problem of preference revelation- Voting Models- Revealing social preference through Majority Voting : The Bowen - Black Majority Voting Model, Arrow's Impossibility Theorem, The Buchanan - Tullock Model - The Wicksell Approach (Absolute and Relative Unanimity) -Revealing social preference through Point Voting, Coleman Approach to revealing social preference-Down's model of Democracy Incentive Mechanism for preference revelation (Groves and Loeb, Tideman, Tulloch) - Bureaucracy, Special interest Groups - rent seeking Cost and Political process –Directly Unproductive Profit Seeking Activity.

### References/ Compulsory Readings

1. H.Dalton. 1991. *Principles of Public Finance*. Allied Publishers.
2. A.C.Pigou. 1928. *A Study in Public Finance*. Macmillan.
3. A.R. Prest. and Barr.N.A. 1960. *Public Finance in Theory and Practice*. London: ELBS.
4. Joseph.E. Stiglitz. 1988. *Economics of the Public Sector*. New York: WAV, Notton& Company.
5. Buchanan J.M, &Flowers M.R. 1986. *Public Finance - An Introductory Text Book*. Illinois: Irwing Publishers.
6. Bernard. P. Herber.1967. *Modern Public Finance. A Study of Public Sector Economics*. Illinois:Irwing Publishers.
7. C. John and V.Vinfrey. *Public Finance, Public Choice and The Public Economy* .NewYork: Harper & Row publishers.
8. R.A and P.B. Musgrave. *Public Finance in Theory and Practice*. Mc Grew Hill.
9. Robin.W. Boadway. *Public Sector Economics*. Winthrop Publishers.
10. John Cullis and Philip Jones. *Public Finance and Public Choice*. Oxford University Press.
11. J.M.Browing and E.K Browning. *Public Finance and the Price System*. New York: Macmillan.
- 12 E.J. Mishan. 1982. *Cost Benefit Analysis*. London: Alien &Unwin.
13. S.K.Goyal. 1985. *Public Enterprises*. New Delhi: UPA.
14. D.N.Dwivedi. 1994. *Reading in Indian Public Finance*. New Delhi:Wiley Eastern Ltd.18.
15. J.M. Buchanan. 1958.*Public Principles of Public Debt*. Irwin.
16. SudiptoMundle.1997. *Public Finance policy issues for India*. OUP.
17. C.T. Standford. *The Economics of Public Finance*. Oxford: Pergamon Press.
18. R.N.Thirpathy. 1985. *Public Finance in Under Developed Countries*. Sterling Publishers.

### Supplementary/suggested Readings

1. Bernad P. Herber. 1999. *Modern Public Finance*. New Delhi: AITBS Publishers Distributors.
2. T.N.Hajela. 2004. *Public Finance*. New Delhi: Konark Publishers. IInd Revised Edition.
3. Amaresh Bagchi. 2011. *Readings in Public Finance*. New Delhi: Oxford university Press.
4. D.K Srivasthava. 2005. *Issues in Indian Public Finance*. New Century Publications.
5. M.S.Chaudan . 2011. *Public Finance: Issues and Problems*. New Delhi: Global Publications.

### MODULE.II: Public Expenditure , Public Enterprises, Public Revenue and Public Debt

Theories of Public Expenditure - Structure &Growth of Public Expenditure in India-Centre and State Economic effects public expenditure-changing attitude towards public enterprise in India, Privatization and Disinvestment of public Sector units in India- Administered Price Mechanism: Criteria for Public Investment (Social Benefit Cost Analysis)-Theory of public revenue-General

and Partial Equilibrium analysis-Shifting and incidence of tax- Incidence and effects of major taxes in India- Tax incidence under various market structure-Measuring incidence-Musgrave's Approach- Allocative & Equity aspect of Personal Income Tax, Excise Duty and GST-Taxable capacity- Theory of Optimal Taxation- Tax Reforms in India: Direct and Indirect Taxation Committee Reports.- public debt- Structure and growth-Centre and State debt in India- Theories of Public Debt- Burden of public debt - Inter-generation Equity aspect of Public debt- Buchanan's Thesis- Domes' views on Fiscal Deficit- forms and redemption of Public Debt- Principles of Public Debt Management-Issues in debt management.

### References/ Compulsory Readings

1. H.Dalton. 1991. *Principles of Public Finance*. Allied Publishers.
2. A.C.Pigou. 1928. *A Study in Public Finance*. Macmillan.
3. A.R. Prest. and Barr.N.A. 1960. *Public Finance in Theory and Practice*. London: ELBS.
4. Joseph.E. Stiglitz. 1988. *Economics of the Public Sector*. New York: WAV, Notton & Company.
5. J.M.Buchanan and M.R Flowers. 1986. *Public Finance - An Introductory Text Book*. Illinois: Irwing Publishers.
6. Bernard. P. Herber. 1967. *Modern Public Finance. A Study of Public Sector Economics*. Illinois: Irwing Publishers.
7. John and V.Vinfrey. *Public Finance, Public Choice and The Public Economy*. New York: Harper and Row publishers.
8. R.A and P.B. Musgrave. *Public Finance in Theory and Practice*. Mc Grew Hill.
9. A.T Peacock and J. Wiseman. 1967. *The Growth of Public Expenditure in the U.K.* George Alien and Unwin Ltd.
10. K.N. Reddy. 1972. *Growth of Public Expenditure in India, 1872-1966*. Delhi: Sterling Publishers.
11. SudiptoMundle and GovindRao. 1997. *Public Expenditure in India: Trends & Issues in Public Finance-Policy Issues for India* (ed.) SudiptoMundle. Calcutta: OUP. Dwivedi.
12. D.N. Dwivedi. 1994. *Reading in Indian Public Finance*. New Delhi: Wiley Eastern Ltd.
13. J.M.Buchanan. 1958. *Public Principles of Public Debt*. Irwin.
14. SudiptoMundle. 1997. *Public Finance policy issues for India*. OUP.
16. C.T.Standford. *The Economics of Public Finance*. Oxford: Pergamon Press.
17. R.N.Thripathy. 1985. *Public Finance in Under Developed Countries*. Sterling Publishers
18. R.J.Chelliah. 1992. *Growth of Public Debt in the Indian economy* (ed) by BimalJalan. Penguin Books.

### Supplementary/suggested Readings

1. Bernad P. Herber. 1999. *Modern Public Finance*. New Delhi: AITBS Publishers Distributors.
2. T.N.Hajela. 2004. *Public Finance*. New Delhi: Konark Publishers. IInd Revised Edition.
3. Amaresh Bagchi. 2011. *Readings in Public Finance*. New Delhi: Oxford university Press.
4. D.K Srivasthava. 2005. *Issues in Indian Public Finance*. New Century Publications.
5. M.S.Chaudan. 2011. *Public Finance: Issues and Problems*. New Delhi: Global Publications.
6. GOI. *Report on Disinvestment by the Disinvestment Commission on various years*.

### MODULE III: Fiscal Policy and Fiscal Federalism

Fiscal policy-Sound Finance and Functional finance- Types of budgeting- Programme, performance budgeting system, Zero based Budget -Reforms in Budgeting - Budgetary Deficit and its measurement- Analysis of latest budgeting in India-fiscal policy in India - Centre — state Financial Relations in India- Vertical & Horizontal imbalance in intergovernmental transfers in India-An Evaluation of Working of Finance Commission in India- Criteria of devolution - - Modified Gadgil Formula –Local Finance-Role of Local self- government in the light of 73rd constitutional amendment - Emerging issues in local financial relations in India.

### References/ Compulsory Readings

1. H.Dalton. 1991. *Principles of Public Finance*. Allied Publishers.
2. A.C.Pigou. 1928. *A Study in Public Finance*. Macmillan.
3. A.R. Prest. and Barr.N.A. 1960. *Public Finance in Theory and Practice*. London: ELBS.
4. Joseph.E. Stiglitz. 1988. *Economics of the Public Sector*. New York: WAV, Notton& Company.
5. J.M.Buchanan and M.R. Flowers.1986. *Public Finance - An Introductory Text Book*. Illinois: Irwing Publishers.
6. Bernard. P. Herber.1967. *Modern Public Finance. A Study of Public Sector Economics*. Illinois:Irwing Publishers.
7. John and V.Vinfrey. *Public Finance, Public Choice and The Public Economy*. NewYork: Harper & Row publishers.
8. R.A and P.B. Musgrave. *Public Finance in Theory and Practice*. Mc Grew Hill.
9. D.N. Dwivedi.1994. *Reading in Indian Public Finance*. New Delhi:Wiley Eastern Ltd.
- 10 David Novick. Programme budgeting, programme analysis and the federal Government. (Hardware) University press.
11. Phyre.P. *Zero Base Budgeting , A Practical Tool for evaluating Expensed*. John Wiely.
12. GovindRao. *Indian Fiscal federalism, major issues in Public Finance* (ed) by SudiptoMundle.
13. I.S.GuIathi. and K.KGeorge.1985. *Essays in federal Financial Relations*. Oxford: IBH
14. Lakdwala . *I UNJOIN State Financial relations*.Lalvanim.

**Supplementary/suggested Readings**

1. Bernad P. Herber. 1999. *Modern Public Finance*. New Delhi: AITBS Publishers Distributors.
2. T.N.Hajela. 2004. *Public Finance*. New Delhi: Konark Publishers. IInd Revised Edition.
3. Amaresh Bagchi. 2011. *Readings in Public Finance*. New Delhi: Oxford university Press.
4. D.K Srivasthava. 2005. *Issues in Indian Public Finance*. New Century Publications.
5. M.S. Chaudan . 2011. *Public Finance: Issues and Problems*. New Delhi: Global Publications.
6. Government of India and Kerala. *Budget Proposals for various years*.



**ECONOMICS OF GROWTH AND DEVELOPMENT**  
**ELECTIVE COURSE**  
**COURSE CODE – EcE002**

**Objectives**

The course covers concept, measurement and indicators of economic growth and development, important theories on economic growth and development, role of agriculture, industry and technology in economic development, international aspects of economic development, planning experiences of India and Kerala and financial inclusion and economic development.

**Outcome**

The course helps the students to identify the development issues and also the basic requirements for economic development of underdeveloped and developing countries.

**MODULE-1 GROWTH, DEVELOPMENT AND THEORIES**

Growth and Development -An overview-The Historical Records; Kuznet's characteristics-Concept and measurement of economic growth and development-Indicators of Development- – National Income- Per capita Income-Dimensions of Development gap-PQLI –HDI –HPI-Gender Related Development Index(GDI) – Gender Empowerment Measure(GEM) –Multi Dimensional Poverty Index –Inequality and development-Kuznet's hypothesis-Lorenz Curve-Gini-Co-efficient- Sen's Entitlement and Capabilities Approach-Development as freedom-Basic need approach Problems of Development-Classical Theories-Cambridge Growth models- Neo-Classical Growth models- Endogeneous Growth models- Development paradigms- Modernist Paradigms- Partial theories of growth and development-The stages of growth: Rostow - Surplus Labour :Lewis-Big Push :Rosenstein Rodan- Balanced Growth: Nurkse – Unbalanced Growth: Hirschman – Critical Minimum Effort Thesis:Leibenstein- Low Level Equilibrium Trap: Nelson-Dual Economy Model: Fei and Ranis Model–Circular and Cumulative Causation : Myrdal-Todaro model.

**References/ Compulsory Readings.**

1. J.R. Hicks. 1965.*Capital and Growth*. New Delhi: OUP.
2. Gunnar Myrdal.1968. *Asian Drama: An Inquiry In to the Poverty of Nations*. II Vol. New York: Pantheon.
3. *World Bank Development Reports for various years*.
4. UNDP. *Human Development Reports*.
5. Debraj Ray. 2001. *Economics of Development*. New Delhi: Oxford University Press.
6. Amartya Sen. 1999. *Development as Freedom*. New Delhi: Oxford University Press.
7. Gerald M Meier and James E Rench (Ed). *Leading Issues in Economic Development*. 7th Edition.
8. A.P.Thirwall. 2003. *Growth and Development with Special Reference to Development Economics*. Palgrave.

9. Michael P. Todaro, and Stephen C. Smith. 2004. *Economic Development*, 8th Edition.
10. Hentry Wan (JR).1971. *Economic Growth*. penguin books.
11. Bakul H Dholakya and Raveendra H Dholakya. 1998. *Theory of Economic Growth and Technical Progress- An Introduction*. Delhi: MacMillian.
12. Hywd G Jones. 1976. *An Introduction to Modern Theory of Economic Growth*. McGraw Hill.
13. Agalwal and S.P. Singh (Ed). 1985. *The Economics of Underdevelopment*. Delhi: OUP, Delhi.
14. J.N. Bhagwati (Ed). 1985. *Dependence and Interdependence- Essays in Development Economics*. Vol-1&2,. Bombay: OUP.
15. Michel P Todaro. 1923. *Economics for Developing World*. London:Longman.
16. Dreze Jean and Sen Amartya. 1993.*Hunger and public Action*. Delhi: OUP.

### **Supplementary/suggested Readings**

- Yujiro Hayami and Yoshihisa Godo. 2005. *Development Economics* (3rd Edn). New Delhi: Oxford University Press.
- M.P.D.Todaro and S.C.Smith. 2005. *Economic development*. 8th Edition. Person Education. Delhi: Indian branch.
- Vandana Desai and Robert B Potter. 2008. *The Companion to development studies-II* edn. A hodder viva edn,. New Delhi: Viva books Pvt Ltd
- H L Ahuja. 2016. *Development Economics*. Edited by S.Chand.

### **MODULE-2 AGRICULTURE, INDUSTRY, CAPITAL AND TECHNOLOGY IN DEVELOPMENT**

Role of Industrialization in Development –factors inhibiting –policies for Industrialisation, agriculture and Economic Development – Agricultural policy in Developing countries – complementary role of industry and agriculture in Development- Globalisation and agriculture-Capital and Development- stages of capital formation- sources-Importance of ICOR--Role of technology in development– Choice of techniques – Significance of capital saving and labour saving techniques- role of Intermediate technology- Issues related to transfer of technology.

### **References/ Compulsory Readings.**

1. Debraj Ray. 2001. *Economics of Development*. New Delhi: Oxford University Press.
2. Gerald M Meier and James E Rench (Ed). *Leading Issues in Economic Development*. 7<sup>th</sup> Edition.
3. A.P.Thirwall. 2003. *Growth and Development with Special Reference to Development Economics*. Palgrave.
4. Michael P. Todaro, and Stephen C. Smith. 2004. *Economic Development*. 8th Edition.
5. Hentry Wan (JR).1971. *Economic Growth*. penguin books
6. Bakul H Dholakya and Raveendra H Dholakya. 1998. *Theory of Economic Growth And Technical Progress- An Introduction*. Delhi: MacMillian.
7. Hywd G Jones. 1976. *An Introduction to Modern Theory of Economic Growth*.

McGraw Hill.

8. Agalwal and S.P. Singh (Ed). 1985. *The Economics of Underdevelopment*. Delhi: OUP.
9. Michel P Todaro. 1923. *Economics for Developing World*. London: Longman.
10. D.Nayyar (Ed). 1994. *Industrial Growth and stagnation: The debate in India*. Oxford University Press.
11. J.Bhagawati and Padma Desai.1970.*Planning for Industrialisation*. Oxford University Press.

### **Supplementary/suggested Readings**

1. Yujiro Hayami and Yoshihisa Godo. 2005. *Development Economics* (3rd Edn). New Delhi: Oxford University Press.
2. M.P.D Todaro and S.C.Smith . 2005. *Economic development*. 8th Edition. Person Education. Delhi: Indian branch.
3. Vandana Desai and Robert B Potter. 2008. *The Companion to development studies-II* edn. A hodder viva edn,. New Delhi: Viva books Pvt Ltd
4. H L Ahuja. 2016. *Development Economics*. Edited by S.Chand.

## **MODULE-3 INTERNATIONAL ASPECTS OF DEVELOPMENT AND PLANNING**

Role of foreign trade, foreign capital and foreign aid in the Development process- Private foreign Investment –MNCs and Development issues- Public foreign Investment – foreign aid and Development –Tied aid and Untied aid - International Agencies and development- IMF-IBRD IFC ADB and UNDP-Rationale for planning –Types, Tools and techniques in planning— Indian Planning Experiences- NITI Aayog- Micro level planning- Decentralized planning experience in Kerala –Development Plans at the local level in Kerala- Role of micro credit – SHGs- Contributions of Grameen Banks: Examples of Bangladesh and Kerala —Kudumba Sree in the development process

### **References/ Compulsory Readings.**

1. Debraj Ray. 2001. *Economics of Development*. New Delhi: Oxford University Press.
2. Gerald M Meier and James E Rench (Ed). *Leading Issues in Economic Development*. 7th Edition.
3. A.P.Thirwall. 2003. *Growth and Development with Special Reference to Development Economics*. Palgrave.
4. Michael P. Todaro, and Stephen C. Smith. 2004. *Economic Development*. 8th Edition.
5. Hywd G Jones. 1976. *An Introduction to Modern Theory of Economic Growth*. McGraw Hill.
6. Agalwal and S.P. Singh (Ed). 1985. *The Economics of Underdevelopment*. Delhi: OUP, Delhi.

7. J.N. Bhagwati (Ed). 1985. *Dependence and Interdependence- Essays in Development Economics*. Vol-1&2,. Bombay: OUP.
8. Michel P Todaro. 1923. *Economics for Developing World*. London:Longman.
9. Sukhomoy Chakraborty. 1998. *Development Planning –Indian Experience*. Delhi: OUP.
10. R.P. Mishra and R.N. Achyutha (Ed). *Micro level planning principles , methods and case Studies*. New Delhi: Concept Publishers.
11. Sukhmoy.Chakrawarti.1998. *Development Planning: The Indian Experience*. India: OUP.

### **Supplementary/suggested Readings**

1. Yujiro Hayami and Yoshihisa Godo. 2005. *Development Economics* (3rd Edn). New Delhi: Oxford University Press.
2. M.P.D Todaro and S.C.Smith . 2005. *Economic development*. 8th Edition. Person Education. Delhi: Indian branch.
3. Vandana Desai and Robert B Potter. 2008. *The Companion to development studies-II* edn. A hodder viva edn,. New Delhi: Viva books Pvt Ltd
4. H L Ahuja. 2016. *Development Economics*. Edited by S.Chand.

**POPULATION STUDIES  
ELECTIVE COURSE  
COURSE CODE – EcE003**

**Objectives**

The basic objective of this paper is to introduce the students to the scope and importance of the discipline of population studies. The students are expected to get clear idea of the evolution and the scope of the discipline, past, present and future scenario of population growth and sex age structures of the world, major regions and India. They will familiar with various sources of demographic data with a focus on India.

**Outcome**

Students will be able to distinguish among different terms used for fertility and mortality study also understanding about population dynamics.

**Module-1**

Population studies-Meaning-Nature-Scope-Importance-basic concepts- Population data-Methods and Sources-World population growth and distribution- Population growth in India and Kerala- Theories of Population growth- Karl Marx's theory of population growth-Malthusian-Optimum and Demographic Transition Theories of Population- human development and millennium development goals. Structure and characteristics of Indian Population- Sex and Age structure- Marital status- Literacy and Education-Religious composition-Ethnic composition-Health- Life Expectancy Index- Population Ageing- Ageing in India and Kerala- Emerging Issues- gender issues and development

**References/ Compulsory Readings**

1. Asha A. Bhande and Tara Kanikkar. 1988. *Population Studies*. Himalaya Publishing House.
2. Prasad P.K. 1990. *Population Planning, Policy and Programme*. New Delhi: Deep and Deep Publications.
3. Colin Neuwel. 1998. *Methods and Models in Demography*. London: Belhaven Press.
4. Peter R. Cox. 1989. *Demography*. New Delhi: Universal Book Stall.

**Supplementary/ Suggested Readings**

- D. S. Adhikari. 2008. *Population challenge and world crisis: documents and case studies*. New Delhi: cyber tech publications.
- Samuel H Preston, Patrick Heuveling and Michel Guillot. 2001. *Demography: Measuring and Modeling Population Processes*. U.K and U. S. A: Black well Publishers.

**Module-2**

Population Dynamics- Mortality- Measures of Mortality- Use of Life- Table Techniques- Sex and Age Pattern of Mortality- Mortality Differentials- Level and Trends in Mortality- Fertility- Level and Trends- Nature of Fertility- Measures- Differentials in Fertility- Theories of Fertility- Nuptiality- Marital Status- Mean age at marriage- Widowhood and Divorce-Population trends in modern economic growth-Mass education and fertility decline-co-operation, inequality and the family (Amartya Sen).

Migration and Urbanization -Basic concepts- Importance- Types of Migration- Migration Differentials- Levels and Trends of Migration- Socio- Economic aspects of Migration-Theory of Migration- Techniques of Measurement of Migration- Urbanization – Distribution and Trends in Urban Population- Measures- Factors affecting Urbanization.

### References/ Compulsory Readings

1. K.C. Scaria and S. Irudayarajan. 1991. *Kerala's Demographic Transition- Determinants and Consequences*. Sage Publications.
2. P.G.K. Panikar and C.R. Soman. 1985. *Health Status of Kerala*. Trivandrum: Centre for Development Studies.
3. Demeny and Geoffrey Menicoll. 1998. *Population and Development*. Earth Scan Publications.
4. D.J. Bogue. 1971. *Principles of Demography*. Wiley.

### Supplementary/ Suggested Readings

- Hansraj. *Population Studies with special reference to India*. New Delhi: Surjit Publications.

### Module-3

Population Projection and Population Policies in India- Population problem, Family planning and family welfare-Population Projection and Estimation- Methods and Importance of Population Projections- use of population data in development planning-Population Policies and Programmes in India-India's Experiences-Population growth and socio economic development, environment and health-Conceptual issues and linkages with environment and health- population and health, population and poverty.

### References/ Compulsory Readings

1. B.D. Misra. 1980. *An Introduction to the study of population*. South Asian Publishers.
2. Rajendra K Sharma. 2007. *Demography and Population Problems*. Atlantic Publishers.
3. S.C. Srivastava. 2004. *Studies in Demography*. Anmol Publications.
4. Moneer Alam. 2006. *Ageing in India; socio- economic and health dimensions*. New Delhi: Academic foundation.
5. Palmore, James A. and Gardner, Robert W. 1983. *Measuring Mortality, Fertility and Natural Increase: a Self-Teaching Guide to Elementary Measures*. Honolulu: East-West Population Institute. East-West Center.

### Supplementary/ Suggested Readings

- Hansraj. *Population Studies with special reference to India*. New Delhi: Surjit Publications.
- B. A. Prakash and V. R. Prabhakaran Nair. 2008. *Kerala's Development Issues in the New Millennium*. New Delhi: Serials publications.
- B. A. Parkash. 2004. *Kerala's Economic development- Performance and Problems in the post liberalized period*. Second edition, New Delhi: Sage Publication.

**OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS**  
**ELECTIVE COURSE**  
**COURSE CODE – EcE004**

**Objectives**

This paper covers the basic operation research techniques and deals with the application of these techniques in business practices. This paper enables the students to familiarize with operation research techniques and its applications in managerial decision making. To introduce the students to the basic operation research techniques such as Linear Programming, Game theory, Input-output analysis, PERT and CPM and inventory control that are widely used in decision making.

**Outcome**

To enable the students to apply operation research techniques in current business practices and to make them draw inference based on the numerical results obtained.

**Module-I:**

**Operations Research** : History and development of OR-meaning and scope applications modeling in Operations Research- OR models and their applications- **Linear programming problems**: formulation of problem- graphical solution- simplex procedure for maximization and minimization- duality concept-solution of dual problem- economic interpretation of dual problem-**Integer linear programming**-solution-algorithms-branch and bound algorithm-zero – one implicit-enumeration algorithm-cutting plane algorithm.

**Transportation model**: Mathematical formulation- general structure of the problem-transportation tables- methods to obtain Initial Basic Feasible Solution (IBFS)- NWCR and VAM- conditions for testing optimality- MODI method for testing optimality solution of balanced and unbalanced problems- **Assignment model**: methods for solving assignment problems- balanced and unbalanced assignment problems- maximization problems.

**References / Compulsory Readings**

1. J.K Sharma. 1997. *Operations Research- Theory and Applications*.
2. William J. Baumol. 1999. *Economic Theory and Operations Analysis*. New Delhi: Prentice Hall of India.

**Suggested/ Supplementary Readings**

- Philips Ravindran and Solberg. *Operations research, principles and Practice*, John Wiley.

**Module- II**

**Non linear programming**: Introduction, Lagrangian method- algebraic forms- Constrained maxima and minima-Kuhn Tucker analysis- Kuhn Tucker conditions for solutions of non linear programming problems- **Quadratic programming**- methods of solving quadratic programming-**Goal programming**-formulation-algorithms-weighting method preemptive method-queuing system.

**Decision Theory:** Introduction- basic concepts- pay off table- opportunity loss or regret table- decision rule- decision making under certainty- under uncertainty- Laplace criterion- maximin or minimax principle- maximax or minimax principle- Harwicz  $\alpha$  criterion- under risk- Expected Opportunity Loss- Expected Value of Perfect Information (EVPI)- Bayesian decision theory- Decision tree- **Game theory:** Introduction- meaning-the zero sum games- pay off matrix- minimax and maximin principle- solution of zero sum two person games- saddle point theorem- mixed strategies- algebraic method, dominance properties- optimal mixed strategies- graphical method and solution of games by LPP-  $2 \times n$  and  $m \times 2$  games- reducing the game problem to LPP- n-person games (concept)-simulation modeling-types-Monte Carlo simulation analysis- inventory simulation model.

### References / Compulsory Readings

1. Rao S.S. *Optimisation Theory and Applications*. New Age International.
2. Taha.H.A. *Operations Research- An Introduction* . Mc.Millan.
3. William J. Baumol. 1999. *Economic Theory and Operations Analysis*. New Delhi: Prentice Hall of India.
4. Kanthi Swarup, Gupta and Man Mohan. *Operations Research*. Sultan Chand & Sons

### Suggested/ Supplementary Readings

- Gross and Harris. *Fundamentals of Queing Theory*. Jon Wiley.
- R. Pannerselvam. 2002. *Operations Research*. PHI

### Module- III

**Network Techniques:** PERT and CPM- Basic concepts- construction of networks- critical path- event times- float and slack, time cost- trade off- resource allocation and scheduling- resource levelling- resource smoothing- project control- updating- difference between PERT and CPM-**deterministic inventory models**-general inventory model-static and dynamic EOQ models-inventory control approach- ABC analysis

### References / Compulsory Readings

1. Kanthi Swarup, Gupta and Man Mohan. *Operations Research*. Sultan Chand & Sons.
2. J.K Sharma. 1997. *Operations Research- Theory and Applications*.

### Suggested/ Supplementary Readings

- Philips Ravindran and Solberg. *Operations research, principles and Practice*. John Wiley.
- R. Pannerselvam. 2002. *Operations Research*. PHI.



**MATHEMATICAL ECONOMICS**  
**ELECTIVE COURSE**  
**COURSE CODE – EcE005**

**Course Objectives**

This course helps to develop, refresh and consolidate knowledge of micro and macro economic theories and modeling with respect to utility, demand, cost; firm optimization; market structure and firm behavior; decisions under certainty and uncertainty; market efficiency etc with the help of algebraic operations; functions and graphs; derivatives and various mathematical optimization techniques. This course enables the students to develop the analytical and mathematical skills related to various economic relationships.

**Course Outcome**

Students will get rigorous training in basic mathematical methods, essential for studying the modern economics literature with mathematical applications.

**Module – 1** (Review of concepts)

The concept of Sets- the Real number system - Identities- Equations- Inequalities-Power of number- Logarithms - Binomial Theorem- Sequences - Functions - Algebraic, Exponential and Logarithmic - Explicit, Implicit, and inverse Functions- Polynomial functional- Higher order function of a single variable- function of more than two independent variables- Use of graphs and diagrams- Differential Calculus – Integral Calculus.

**References/Compulsory Readings**

1. Allen R.G.D. 1956. *Mathematical Economics*. Macmillan Co. Ltd.
2. Allen R.G.D. 1967. *Macroeconomic Theory*. Macmillan Co. Ltd.
3. Birchenhall. C. and Grout. P. 1984. *Mathematics for Modern Economics*. Philip Alien. Oxford: Harness and Noble Books.
4. J.M. Henderson and R.E. Quandt. 1980. *Microeconomic Theory a Mathematical Approach*. Me. Graw Hill International Ltd.

**Supplementary/suggested Readings**

- Edward T. Dowling, 2011. *Introduction to Mathematical Economics*. Schaum's Outline.
- Adam Ostaszewski and Kenneth Binmore, 1993. *Mathematics in Economics: Models and Methods* .

**Module – II** (Theory of Demand and Production)

Maximization of utility - demand functions - Elasticity - Properties of demand functions - Slutsky equation - Direct and cross effects - Separable and additive utility functions - Homogeneous and homothetic utility functions - Indirect utility function - Duality in consumption - Roy's identity- Linear expenditure systems - Constant elasticity models - The problem of choice involving risk – Expected utility - Risk and insurance- Production function -

Cob-Douglas production function - CES production function - VES production function - Cost function: Derivation of cost as a function of output - Input demand function.

### References/Compulsory Readings

1. Krishna K.L. (ed.). 1997. *Econometric Applications in India*. New Delhi: Oxford University Press.
2. Amitabh Kundu, et. Al. 1976. *Input Output framework and Economic Analysis*. New Delhi: Centre for the study of Regional Development.
3. David. F. Heathfield and Soren Wibe. 1987. *Introduction to Cost and Production Function*., Macmillan Education Ltd.

### Supplementary/suggested Readings

- Michael Hoy. 2011. *Student's Solution Manual for Mathematics for Economics*.
- Akira Takayama. 1993. *Analytical Methods in Economics*.
- Michael D. Intriligator. 1971. *Mathematical Optimization and Economic Theory*.

### Module - III (Monopoly and linear models)

Monopoly and profit maximisation - Price discrimination - Taxation and monopoly - Multiple plant and multiple product monopoly - Revenue maximization monopoly - monopoly in the input market - Cournot- Nash model – Stackelberg model - Sweezy model - Theory of games: Two person zero-sum game - Pure and mixed strategy – Saddle point theorem. Linear programming: Primal and dual problem – General linear programme - Complementary slackness theorem. - Simplex solution. Input output analysis: Open and closed Leontief system - Hawkins – Simons condition.

### References/Compulsory Readings

1. J.M. Henderson and R.E. Quandt. 1980. *Microeconomic Theory a Mathematical Approach*. Me. Graw Hill International Ltd.
2. Leontief. W.W. 1971 *The Structure of American Economy 1919-1939*, Bombay: Vora and Co. Publishers (Pvt.) Ltd.
3. Sydsaeter, Knut and Peter Hammond. 2002. *Essential Mathematics for Economic Analysis*. England : Prentice Hall: Harlow.
4. Eugene Silberberg. 1990. *The Structure of Economics a Mathematical Analysis* (Second Edition). Mc Graw Hill International (ed).

### Supplementary/suggested Readings

- Alpha C . Chiang- Kevin Wainwright. 2005. *Fundamental Methods of Mathematical Economics*.
- [Lawrence E. Blume](#), [Carl P. Simon](#) .1994. *Mathematics for Economists*.

**AGRICULTURAL ECONOMICS**  
**ELECTIVE COURSE**  
**COURSE CODE – EcE009**

**Objectives**

The course gives an idea on agricultural economics, role of agriculture in economic development, theoretical basis for agricultural development, interrelation ship between agriculture and industry, problems and policies for agriculture development, economic decision in agriculture production, agriculture price policy and marketing, agriculture credit, impact of globalization and WTO on Indian agriculture and performance and constraints in agriculture sector in Kerala.

**Outcome**

The course provides an insight to the students about the problems and performance of agriculture in India and Kerala and the need of agriculture sector in the development of an economy.

**Module – 1**

Nature and scope of Agricultural Economics – Role of agriculture in economic development – Theories of agricultural development – Schultz, Mellor, Lewis and Boserup – Inter-relationship between agriculture and industry – Terms of trade between agriculture and industry-Agricultural Development in India – Agricultural policy since independence – Institutional and technological changes – Impact of agricultural development on environment – Organic farming–Problems of agricultural development — National Commission on Farmers – Impact of WTO-Agreements on Agriculture – Trade liberalization and agricultural exports – Globalization and Indian agriculture.

**References/ Compulsory Readings**

1. T. W. Shultz. 1965. *Transforming traditional Agriculture*. New Haven, London Yale, University Press.
2. J. W. Mellor. *The Economics of Agricultural Development*. Bombay: Vora & Co.
3. S. Ghata, and K. Ingersent. *Agriculture and Economic Development*. New Delhi.
4. W. A. Lewis. *Economic Development with unlimited supplies of labour*.
5. Karl Eicher, and Lawrence Witt. *Agriculture in Economic Development*. Vora & Co Publishers Pvt. Limited
6. C. E. Bishop, and W. D. Toussiant. *Introduction to Agricultural Economic Analysis*.
7. O. S. Srivastava. *Theoretical Issues in Agricultural Economics*. Allied Publishers Pvt. Ltd.
8. R. N. Soni. *Leading Issues in Agricultural Economics*. Vishal Publishing Co.
9. R. K. Lekhi, and Joginder Singh. *Agricultural Economics*. Kalyani Publishers
10. R. Desai. *Agricultural Economics*. Himalaya Publishing House
11. S. A. R. Bilgrami. *An Introduction to Agricultural Economics*. Himalaya Publishing House.

12. Sadhu, and Singh. *Fundamentals of Agricultural Economics*. Himalaya Publishing House.
13. Uma Kapila. 2005. *Understanding the Problems of Indian Economy*. Academic Foundation
14. Uma Kapila. *Indian Economy Since Independence*. Academic Foundation
15. M. A. Oommen. *Kerala Economy Since Independence*. Oxford & IBH Publishing Co.
16. B.A. Prakash (Ed). *Kerala Economy Problems and Prospects*. New Delhi: Sage Publications,
17. M. A. Oommen (Ed). *Kerala's Development Experience – II*. Institute of Social Science, Concept Publishing Co.
18. B. A. Prakash. (Ed). *Kerala's Economic Development, Performance and Problems in the Post Liberalization Period*. New Delhi: Sage Publications.
19. G. S. Bhalla. 1995. *Globalization & Agricultural Policy in India*. Indian Journal of Agricultural Economics. Vol. 50, No. 1, January-March.
20. C. H. Hanumantha Rao. 1995. *Liberalization of Agriculture in India*. Indian Journal of Agricultural Economics. Vol. 50, No. 3, July-September.
21. D. Rudrappan. 2003. *Economic Reforms and Agriculture*. Yojana, Vol. 47, No. 11, November.
22. C. H. Hanumantha Rao. 2001. *WTO and Viability of Indian Agriculture*. Economic & Political Weekly, September 8-14, 2001, Vol. XXXVL, No. 36
23. P. K. Singh. 2003. *Reforms in the Agricultural Sector*. Yojana, Vol. 47, No. 11, November.
24. *Websites of Agricultural Statistics, Agricultural Network Information Centre*. State Planning Board. Planning Commission.
25. *Current articles related to various modules in EPW*. Indian Journal of Agricultural Economics. Agricultural Situations in India. Yojana and other referred journals.

### Supplementary/suggested Readings

- A. Rudra. 1982. *Indian Agricultural Economics-Myth and realities*. New Delhi: Allied publishers.
- P.C. Bansil .1977. *Agricultural Problems in India*. Intl Book Distributors. 2 edition.
- Anwarul Hoda. 2001. *WTO agreement in Indian Agriculture*. New Delhi: Social Science Press,

### Module – 2

Economic Decision in Agricultural Production –Resource use and efficiency– Systems and types of farming –Agricultural subsidies-Crop insurance – Futures trading-Demand and supply of agricultural products – Characteristics of demand and supply –Cobweb theorem – Agricultural prices –Agricultural price policy and food security in India – Agricultural marketing – Present system of agricultural marketing in India – Agricultural credit – Structure and problems of credit in India.

### References/ Compulsory Readings

1. J. W. Mellor. *The Economics of Agricultural Development*. Bombay: Vora & Co.
2. S. Ghata, and K. Ingersent. *Agriculture and Economic Development*. New Delhi.
3. W. A. Lewis. *Economic Development with unlimited supplies of labour*.
4. Karl Eicher, and Lawrence Witt. *Agriculture in Economic Development*. Vora & Co Publishers Pvt. Limited
5. C. E. Bishop, and W. D. Toussiant. *Introduction to Agricultural Economic Analysis*.
6. O. S. Srivastava. *Theoretical Issues in Agricultural Economics*. Allied Publishers Pvt. Ltd.
7. R. N. Soni. *Leading Issues in Agricultural Economics*. Vishal Publishing Co.
8. R. K. Lekhi, and Joginder Singh. *Agricultural Economics*. Kalyani Publishers
9. R. Desai. *Agricultural Economics*. Himalaya Publishing House
10. S. A. R. Bilgrami. *An Introduction to Agricultural Economics*. Himalaya Publishing House.
11. Sadhu and Singh. *Fundamentals of Agricultural Economics*. Himalaya Publishing
12. C. A. Robertson. *An Introduction to Agricultural Production Economics and Farm Management*.
13. E.O. Heady. 1961. *Economics of Agricultural Production and Resource use*. Prentice Hall.
14. C. H. Hanumantha Rao. 1965. *Agricultural Production Function Costs and returns in India*. Tata McGraw Hill.
15. *Websites of Agricultural Statistics, Agricultural Network Information Centre*. State Planning Board. Planning Commission.
16. *Current articles* related to various modules in EPW. Indian Journal of Agricultural Economics. Agricultural Situations in India. Yojana and other referred journals.

### Supplementary/suggested Readings

1. A Rudra .1982. *Indian Agricultural Economics-Myth and realities*. New Delhi: Allied publishers.
2. P.C. Bansil. 1977. *Agricultural Problems in India*. Intl Book Distributors. 2 edition.
3. Joseph A McMohan. *Agricultural Marketing in India* by A.K. Singhal. Anmol Publications

### Module – 3

Agricultural performance of Kerala – Trends in agricultural growth – Land reforms – Group farming – Lease land farming – Current problems of the agricultural sector – Shift in cropping pattern – Sustainable agriculture –Emerging constraints and prospects of agricultural development in Kerala.

### References/ Compulsory Readings

1. M. A. Oommen. *Kerala Economy Since Independence*. Oxford & IBH Publishing Co.
2. B.A. Prakash (Ed). *Kerala Economy Problems and Prospects*. New Delhi: Sage Publications.
3. M. A. Oommen (Ed). *Kerala's Development Experience – II*. Institute of Social Science, Concept Publishing Co.
4. B. A. Prakash. (Ed). *Kerala's Economic Development, Performance and Problems in the Post Liberalization Period*. New Delhi: Sage Publications.
5. N. Karunakaran. 2013. *Change in cropping pattern and food security – a challenge to poor population: a Kerala experience* .*Social Action*. Vol. 63.No 1. PP: 48-58
6. N. Karunakaran. 2012. *Crop Diversification and chemical pollution: A conflict in the sustainability of the agricultural sector of Kerala*. *Indian Journal of Social Development*, Vol. 12. No. 2. PP: 357-368.
7. Karunakaran. N and Gangadharan. K 2013. *Growth of Output of Principal Crops in Kerala: A Decomposition Analysis*. *Middle–East Journal of Scientific Research*. Vol. No. 8. PP: 1087-1097.
8. Srikumar Chattopadhyay and Richard W Franke .2006.*Causes of concern: land use change, Striving for sustainability, Environmental stress and Democratic initiatives in Kerala*. New Delhi: Concept Publishing Company.
9. Mohandas. M .2005.*Agricultural Development in Kerala; in Kerala Economy- Trajectories, Challenges and Implications* (Ed), by Rajasenan D and Gerald de Groot.
10. K.P.Mani .2009. *Cropping pattern in Kerala - spatial inter-temporal analysis*. *Kerala Economy: Trends during the post-reform period* (Ed), by Rajan K. New Delhi: Serials Publications.

### Supplementary/suggested Readings

1. *Websites* of Agricultural Statistics, Agricultural Network Information Centre. State Planning Board. Planning Commission.
2. *Current articles* related to various modules in EPW. *Indian Journal of Agricultural Economics*. *Agricultural Situations in India*. *Yojana* and other referred journals.

**PROJECT FORMULATION AND EVALUATION**  
**ELECTIVE COURSE**  
**COURSE CODE – EcE014**

**Course Objectives**

This course will provide insights into the capital budgeting structure of an economy, how it operates, starting from the planning phase to the review, why economic problems occur and the reasons why policy makers make the decisions. This course is designed to provide economic knowledge and skills necessary to make well-informed business and accounting decisions. It will also introduce various portfolio planning tools and techniques to facilitate investment decision-making practices.

**Course Outcome**

Students will get theoretical tools and practical experience necessary for the appraisal of investment projects and programmes. Students will gain knowledge in concepts, advantages and drawbacks of each of the main approaches used in project management.

**Module - 1**

Project formulation and analysis - nature and scope - project analysis, an overview - capital expenditures - phases of capital budgeting - levels of decision making - facets of project analysis - key issues in project analysis - objectives of capital budgeting - resource allocation, criteria, tools, approaches and issues - generation and screening of project ideas - scouting for project ideas - Project analysis and evaluation - market and demand analysis - methods of demand forecasting - qualitative, time series, and casual methods - technical analysis materials and inputs - product mix - plant capacity - project charts and layouts – work schedule - financial analysis - project cost - sources of finance - estimates - cost of production - break-even point - cash flow statements - balance sheets.

**References/Compulsory Readings**

- Prasanna Chandra.1993. *Financial Management - Theory and Practice*. New Delhi : Tata McGraw Hill.
- Prasanna Chandra.1995. *Projects, Planning, Analysis, Selection Implementation and Review*. New Delhi : Tata McGraw Hill Publishing Co.
- Brealey, R. & S. Myers. 1991. *Principles of Corporate Finance*. New York: McGraw Hill.
- Dasgupta, Partha, Amartya Sen and Stephen Marglin. 1972. *Guidelines for Project Evaluation*. New Delhi ; Oxford & IBH.
- J. Cvitanic and Zapatero F .2004. *Introduction to Economics and Mathematics of Financial Markets*. London : MIT Press, Cambridge.

**Supplementary/suggested Readings**

- E. J. Elton and M.J. Gruber. 1995. *Modern Portfolio Theory and Investment Analysis*. London : Wiley.
- Lutz, F. & Lutz. 1951 *The Theory of Investment of the firm*. Princeton University Press.

## Module - II

Measuring project cash flows - components - biases in cash flow C estimation - time value of money - cost of capital - basic concepts, premises and rationale - cost of capital in practice - appraisal criteria, net present value, benefit cost ratio - internal rate of return - payback period - accounting rate of return - assessment of various methods – risk analysis - types and measures of project risk - Sensitivity analysis –Scenario analysis- Simulation analysis - Decision tree analysis- firm risk and market risk

### References/Compulsory Readings

- Pearce, DW and CA Nash .1981. *The social Appraisal of Projects*. Macmillan.
- Pitale, R.L. 1987. *Project Appraisal Techniques*. New Delhi: Oxford and IBH
- Masse, P. 1962. *Optimal Investment Decisions : Rules of Action and Criteria for Choice*. Englewood: Prentice Hall.

### Supplementary/suggested Readings

- Mikkelsen, Britha. 2005. *Methods for Development Work and Research*. New Delhi : Sage Publications.
- Mize J.H. & J.G. Cox, *Essentials of Simulation*. England : Prentice-Hall.

## Module -III

Special decision situations - choice between mutually exclusive projects - determination of economic life- inflation and capital budgeting - social cost benefit analysis - multiple projects and constraints- project dependence- capital rationing-method of ranking - options and flexibility -qualitative factors-Project Management - network techniques of project management - PERT and CPM - network cost system - project review -performance evaluation.

### References/Compulsory Readings

- Bussey L.E.1978. *The Economic Analysis of Industrial Projects*. Englewood: Prentice Hall.
- Charnes. A & W.W. Cooper. 1961. *Management Models and Industrial Applications of Linear Programming*. New York: John Wiley & Sons.
- William J. Baumol. 1978. *Economic Theory and Operations Analysis*. Englewood: Prentice Hall.
- Ajith K. Dasgupta & D.W. Pearce.1987. *Cost Benefit Analysis*. London: Macmillan ELBS.
- Cleland, David I., 1995. *Project Management: Strategic, Design and Implementation*. New Delhi: McGraw Hill.



- Eschenbach, Ted, Lynn E. Bussey, Neal A. Lewis, Joseph C. Hartman .2015. *Economic Analysis of Industrial Projects*. Oxford University Press.
- Esty, Benjamin .2003. *Modern Project Finance: A Casebook*. John Wiley & Sons.
- Finnerty, John D. 2007. *Project Financing: asset based financial engineering*. 2nd ed John Wiley & sons.
- Gass, S.I.1969. *Linear Programming: Methods and Applications*. New York: McGraw Hill.
- Ghattas, R.G. and Sandra L.McKee, 2003. *Practical Project Management*. Pearson.
- Haley, C.W. and L.D. Schall. *The Theory of Financial Decisions*. New York : McGraw Hill.
- Kasor, Shrutika .2003. *Project Management*. New Delhi; Sumit Enterprises.
- Little I.M.D. and J.A Mirrlees. 1974. *Project Appraisal and Planning for Developing Countries*., London : Hienemann Educational Books.
- Miller R.W.1963. *Schedule Cost and Profit Control with PERT*. New York. McGraw Hill.
- Mishan, EJ .1977. *Cost-Benefit Analysis*. Second edition. London: George Allen & Unwin.
- Moder, J.J. and C.R. Philips. 1964. *Project Management with CPM and PERT*. New York: Reinhold Publishing Corporation.

### Supplementary/suggested Readings

1. David A. Dubofsky and Thomas W. Miller .2003. *Derivatives: Valuation and Risk Management*. OUP.
2. Z. Bodie, A. Kane and A.J. Marcus .2004. *Investments*. London: Irwin McGraw Hill.
3. Bruce Tuckman .2002. *Fixed Income Securities*. Willey Finance.
4. J. C. Hull .2004. *Options, Futures and other Derivatives*. New Jersey: Prentice- Hall.
5. Govt. of India. *Planning Commission Manual Project Appraisal: Industries*.
6. UNIDO, *Guidelines for practical project appraisal*.

### Journals :

1. *Economic & Political Weekly*, Bombay
2. *Commerce*
3. *Financial Management*, Winter and Summer
4. *Business today*
5. *Journal of Finance*
6. *Indian Journal of Accounting*
7. *Chartered Accountant*, Journal of CA's Association

**HEALTH ECONOMICS  
ELECTIVE COURSE  
COURSE CODE – EcE015**

**Objectives**

Health economics is a growing field of economics primarily dealing with issues relating to scarcity in the allocation of health and health care. In the recent past, some of the policies by the state and federal governments have involved issues that have been analyzed by the health economist.

**Outcome**

This paper is to familiarize the students with economic ideas and motivate them into undertaking future research and build their careers.

**Module-1: Introduction** Why Health Economics? Nature and Scope- Determinants of Health - Health and Development – Issues of Availability, Accessibility, Cost and quality.

Theoretical Foundations in Health Economics: Demand and Supply for Health-Demand and Supply of Human resources for health -The Production of Health- The Demand and supply of health workers –Determinants of Demand and supply.

**References/ Compulsory Readings:**

- 1) Holland, Goodman and Stano . 2009. *The Economics of Health and Health Care*. Pearson Education.
- 2) Zweifel, P and Breyer, F. 1997. *The Health Economics*. OUP: Oxford.
- 3) Turshen. M .1989. *The Politics of Health*. London: Zed Books Ltd.
- 4) Monica Das Gupta,Chen. L.C and Krishnan T. N. 1996. *Health , Poverty and Development in India*. New Delhi: OUP.

**Supplementary/ Suggested Readings**

- Narayana D . 2008. *High Health Achievements And Good Access To Health Care At Great Cost: The Emerging Kerala Situation in Haddad et.al (ed): Safeguarding the health sector in times of macroeconomic instability: policy lessons for low- and middle-income countries*.
- Wagstaff, Adam . 1986. *The Demand for Health: A Simplified Grossman Model*. Bulletin of Economic Research, Vol.38, No.1.

**Module-2: Health planning** Types – stages and challenges in planning – health inequalities – health financing – and health problem performance – concepts, criteria and measurement – health system organization models-What is health care system?-Why do health care system differs-Four models of health care system-Free market model-Social insurance-NHS and socialist.

**References/ Compulsory Readings:**

1. John davis . 2001. *The Social Economics of Health Care*. London: Routledge.

2. Imrana Quadeer ed. 2003. *Public Health and Poverty of Reforms*. New Delhi: Sage publications.
3. Lee, Kenneth and Anne Mills ed. 1985. *The economics of Health in Developing Countries*. OUP: Oxford.
4. Baru, R,V. 1998. *Private Health Care in India: Social Characteristics and Trends*. New Delhi: Sage publications.

#### **Supplementary/ Suggested Readings**

- Wagstaff, Adam . 1986. *The Demand for Health: A Simplified Grossman Model*. Bulletin of Economic Research, Vol.38, No.1.
- Gangadharan K. 2010. *Health and Development: The Millennium Perspectives*. New Delhi: Rawat Books.

**Module-3: Externalities and Market Failure** Issues of Externalities-Private sector in health care provision-the role of public/private mix in health system-privatization of public health – problem of mixing public and private. - Government Intervention in Health Care Markets - Economic Rationale for Government Intervention - Government Failures and Competitive Strategies-Urban health system overview of methods of studying urban health system. Health Care Sector in India- Public and Private Care Providers-Factors influencing the growth of private sector in health- Economic Reforms and Health Sector in India - Health Insurance: Issues and Strategies – User Financing: Issues. Health and nutritional deprivation among the marginalized - Health Care Development in Kerala - Is Kerala’s Health Care Sector Sustainable? Growing population and health of elderly.

#### **References/ Compulsory Readings:**

1. Ashokan, A. 2009. *Perspectives of Health Economics*. New Delhi: Serials Publications.
2. Berman Peter . 1995. *Health Sector Reforms in Developing Countries, Making Health Developments Sustainable*. Boston: Harvard School of Public Health.
3. Gangadharan K. 2009. *Paradigm Shift in health and Education in India*. New Delhi: Serials.
4. Arrow, Kenneth J . 1963. *Uncertainty and welfare economics of medical care*. American Economic Review.

#### **Supplementary/ Suggested Readings**

- Gangadharan K. 2010. *Health and Development: The Millennium Perspectives*. New Delhi: Rawat Books.
- Gangadharan. K. 2012. *Nutritional and Health care deprivation An inter caste analysis*. New Delhi: Manglam Publication.
- Guy Carrin. 2009. *Health Systems Policy, Finance, and Organization*. Academic Press.

**DEVELOPMENT OF ECONOMIC IDEAS  
ELECTIVE COURSE  
COURSE CODE – EcE016**

**Objectives**

The course covers the development of major economic ideas from Mercantalism to modern economics and also the development of Indian economic thought from ancient to modern thoughts.

**Outcome**

The paper provides the students an in depth knowledge on the history of economic thought and create a bases for the formation of new economic ideas among the students.

**Module - I**

Introduction: What is Economic thought - Definitions - Mercantilism –Major ideas of Mercantilists : Population, Interest, Wages, Production, Taxation. Physiocracy :Physiocratic doctrines : Natural Order, The Net Product, The circulation of wealth. The Classical School : Adam Smith : Division of labour - Naturalism and optimism - Economic Liberty - Theory of Value - Theory of Distribution -on wages, on profit, on rent - Canons of taxation - Productive and unproductive labour - Theory of capital, economic development. David Ricardo : Theories of Value, Distribution, Wages, Profit, Foreign Trade, Money, Theory of Economic Development. T.R. Malthus : Theory of population, Malthusian Controversy of Market Glut. J.B. Say : Scope of Political Economy - Law of Market. Jeremy Bentham:The Systems J.S. Mill: Mill's Socialist Programme. VonThunen : Price, Distribution.

**References/ Compulsory Readings**

1. Eric Roll. 1953. *A History of Economic Thought*. Prentice Hall.
2. L.H. Haney. 1913. *History of Economic Thought*. Macmillan Company.
3. J.P. Bell. 1967. *A History of Economic Thought*. Ronald Presss.
4. V.A. Schumpeter. 1994. *A History of Economic Analysis*. Routledge.
5. O.H. Taylor. 2011. *A History of Economic Thought*. Literary Licensing.
6. Robert Lekachman. 1959. *A History of Economic Ideas*. Harper.
7. P.C. Newman . 1952.*History of Economic Doctrines*. Prentice Hall.
8. Gide &Rist. 1949. *A History of Economic Thought*. Harrap and Company Ltd.
9. Alexander Gray. 1956.*Development of Economic Doctrines*. Great Britain: Northumberland Press Ltd.
10. E. Whittaker. 1960. *Schools and Streams of Economic Thought*.Chicago: Rand Mc Nally.

### Supplementary/suggested Readings

- H.W. Spiegel. 1971. *The Growth of Economic Thought*. Durham.NC: Duke University Press.
- T. Negishi. 1994. *The History of Economics: Collected Essays*.Vol. II. Aldershot. UK: Edward Elgar.
- J. Niehans.1990. *A History of Economic Theory: Classic contributions-1720-1890*. Baltimore: Johns Hopkins University Press.
- R.V. Eagly. 1984. *The Structure of Classical Economic Theory*. New York: Oxford University Press.
- J. Appleby. 1978. *Economic Thought and Ideology in Seventeenth Century England* Princeton: Princeton University Press.

### Module - II

Critics of Classics : The Nationalist critics : Muller, Frederich List, Historical Critics : William Roscher, Gustav Schmoller. The British School : Walter Bagehot - Socialist Critics : St. Simon, Sismondi, Robert Owen, Charles Fourier, Louis Blanc, Joseph Proudhon, State Socialists : Karl Robertus. Ferdinand Lassals, Scientific Socialists : Karl Marx - Materialistic Interpretation of History, Dialectical Materialism - Theory of Surplus Value. Theory of Economic Development.Frederich Engels Karl Kautsky and Rosa Luxemburg, Rudolf Hilferding, V.I. Lenin. Neo-Classicals : Subjective School : Karl Menger, Von Wieser and Bohn Bawerk, Marginalists/Mathematical School, HeimannGossen, Jevons, Walras, Gustav Cassel, Vilfredo Pareto, J.B. Clark, Knut Wicksell, Wicksteed, Alfred Marshall, A.C. Pigou, Irving Fisher, Institutionalism Thorstein Veblen, J.R. Commons, W.C. Mitchell. Modern Economists; J.M. Keynes, Post Keynesians, Milton Friedman.

### References/ Compulsory Readings

1. Eric Roll. 1953. *A History of Economic Thought*. Prentice Hall.
2. L.H. Haney. 1913. *History of Economic Thought*. Macmillan Company.
3. J.P. Bell. 1967. *A History of Economic Thought*. Ronald Press.
4. O.H. Taylor. 2011. *A History of Economic Thought*. Literary Licensing.
5. Robert Lekachman. 1959. *A History of Economic Ideas*. Harper.
6. P.C. Newman . 1952.*History of Economic Doctrines*. Prentice Hall.
7. Gide &Rist. 1949. *A History of Economic Thought*. Harrap and Company Ltd.
8. Alexander Gray. 1956.*Development of Economic Doctrines*. Great Britain: Northumberland Press Ltd.
9. E. Whittaker. 1960. *Schools and Streams of Economic Thought*.Chicago: Rand Mc Nally.
10. Karl Marx. 1972. *Theory of Surplus Value (Part -3)*. Lawrence & Wishart,

### Supplementary/suggested Readings

1. H.W. Spiegel. 1971. *The Growth of Economic Thought*. Durham.NC: Duke University Press.
2. T. Negishi. 1994. *The History of Economics: Collected Essays*.Vol. II. Aldershot. UK: Edward Elgar.
3. P. Deane. 1978. *The Evolution of Economic Ideas*. Cambridge. UK: Cambridge University Press.
4. M. Blaug.1986. *Great Economists Before Keynes*. Cambridge. UK: Cambridge University Press.
5. R. Backhouse.1985. *A History of Modern Economic Analysis*. Oxford: Blackwell.
6. R. Backhouse.1988. *Economists and the Economy: The Evolution of Economic Ideas, 1600 to the Present Day*. New Brunswick: Transaction.
7. I. Rima. 1967. *Development of Economic Analysis*. Homewood, Ill.R. D. Irwin.

### Module - III

Indian Economic Thought : Ancient Economic Thought : Koutilya, Modern Economic Thought – Dadabai Naoroji, M.G. Ranade, Mahatma Gandhi, Ambedkar and Nehru.

### References/ Compulsory Readings

- 1.Ajit K. Dasgupta. 1993. *History of Indian Economic Thought*. London:Routledge.
- 2.Roger Boesche. 2002. *The First Great Political Realist- Koutilya and His Arthasastra*. New York: Lexington Books.
3. M.K. Gandhi. *Collected Works (3 Volumes)*
4. O.P.Misra.1995. *Economic Thought of Gandhi and Nehru- A Comparative Analysis*. New Delhi:M.D. Publication Pvt. Ltd.
5. Bhimrao Ramji Ambedkar.1979. *Babasaheb Ambedkar, Writings and Speeches, Volume 19*. Education Department, Government of Maharashtra.
6. Arvind D Karmarkar. 1974. *Economic Thought in Modern India: Themes in Indian Economic Thinking and Analysis Since 1870 to Present Day*.University of California: J.S.S. Institute of Economic Research.
- 7.O.P.Brahmachary. 1995. *Economic Ideas of Mahadev Govind Ranade- Relevance Under New Economic Policies of India*. New Delhi: Deep and Deep Publications.

### Supplementary/suggested Readings

- 1.*Routledge Hand book of the History of Global Economic Thought*. edited by Vincent Barnett. Oxon: Routledge.
- 2.Brandon Dupont. 2017. *The History of Economic Ideas-Economic Thought in Contemporary Context*. New York: Routledge.
- 3.M.L.Dantwala.1947.*Economic Ideology of Nehru*.EPW.

**APPLIED ECONOMETRICS  
ELECTIVE COURSE  
COURSE CODE – EcE017**

**Objectives**

This course presents the basic econometrics techniques emphasizing numerical estimation of economic relationships as applied to practical economic and managerial problems. To enable the students to learn the basic econometric techniques relating to the estimation of parameters.

**Outcome**

On successful completion of the course the students should have understood the estimation techniques, learned the difficulties involved in the estimation process, evaluation of parameters and enable understanding scientific decision making process.

**MODULE I:** Generalized linear Model Aitken's theorem (statement only); GLS estimator, Asymptotic distribution of GLS estimator; Analysis of residuals: Standardized, Studentized and predicted residuals; Granger's test of causality-treating outliers; Comparing two linear regression models; Dummy variable approach; Stepwise and Piecewise linear regression; Switching Regression Model. Criteria for model selection Goodness of fit measures; R<sup>2</sup> and adjusted R<sup>2</sup> Criteria; Cp criterion; Generalized Mean Squared error criterion-information criteria-AIC, SBC; Test for normality- Jarque-Bera test- Shapiro-Wilk test- Minimum Absolute Deviation (MAD) estimation- Box-Cox transformations. MA, AR and ARIMA models -Unit roots –Testing for unit roots

**References/ Compulsory Readings**

1. Enders, W. 2006. *Applied Econometric Time Series*. John Wiley and Sons.
2. Wooldridge, J. M. 2001. *Econometric Analysis of Cross Section and Panel Data*. MIT Press.

**Supplementary/ Suggested Readings**

- Cook. D and Weisberg. S. 1982. *Residuals and Inference in Regression*. Chapman and Hall.

**MODULE II:** Non-Linear Regression Non-Linear regression; Non linear least squares estimation; Maximum Likelihood estimation; Idea of computational methods; Gradient methods, Steepest descent method and Newton-raphson method; testing general Nonlinear hypothesis; Wald test, Lagrange multiplier test and likelihood ratio Test. Limited Dependent Variable Models Introduction to binary variables, limitation of LPM, logistic curve, Probit and Logit models, predicted probabilities, censored versus truncation, TOBIT model, ordinal models, multinomial models, and nested models

**References/ Compulsory Readings**

1. William H. Greene . *Econometric Analysis*. Pearson Education.
2. A.Koutsoyiannis. 1992. *Theory of Econometrics: An Introductory Exposition of Econometric Methods*. Educational Low-Priced Books Scheme, McMillan Education Ltd

**Supplementary/ Suggested Readings**

Johnston, J. 1984. *Econometric Methods*. MC Graw Hill

**MODULE III:** Panel Data Models Introduction to panel data, pooled model, within and between estimators, fixed effects, random effects, Hausman test, one way and two way model, random coefficients, dynamic panel data models, difference in difference methodology and dynamic panel data, Generalised Method of Moments estimator- panel unit root and cointegration, panel VAR models

**References/ Compulsory Readings**

1. Damodar Gujarathi . 1999. *Basic Econometrics*. Tata MC Graw Hill Ltd.
2. M. Upender. *Applied Econometrics*. Vrinda Publications.

**Supplementary/ Suggested Readings**

- Judge, C.G.Griffths and Hill. R.C. 1985. *Theory and Practice of Econometrics*. John Wiley.
- Kleinbum, Kupper, Nizam and Muller. 2008. *Applied regression analysis and other multivariate methods*. Duxbury applied series.



Reg. No.....

Name.....

**SECOND SEMESTER M.A.DEGREE EXAMINATION**  
**ECONOMICS**  
**PAPER – V : EcC005: MICRO ECONOMIC THEORY II**  
**(CORE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

*Answer **all** questions.*

*Each question carries 2 mark*

1. Explain sales revenue maximization model
2. Explain Williamson model of managerial discretion theory
3. Explain balanced growth model
4. Explain Cyert and March theory
5. Explain mark up pricing
6. Explain Bains limit pricing model
7. Explain the types of games
8. Explain the approaches of decision under uncertainty
9. Explain the critique of neoclassical theory of the firm
10. Explain the postulates of Sylos-Labini model

(10×2=20 marks)

PART B (Short essay)

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Explain classical theory of distribution

or

Explain marginal productivity theory

12. Explain Kaldor theory of distribution

or

Explain the assumptions of 2x2x2 model

13. Explain existence, uniqueness and stability in general equilibrium model

or

Discuss Passinetti theory of distribution

14. Explain Cobb-Douglas production function

Or

Explain widows cruse model

(4×5=20 marks)

PART C (Essay)

*Answer **any two** questions.*

*Each question carries **10** marks*

15. Discuss Pareto optimality criteria

or

Discuss new welfare economics

16. Explain Bergson-Samuelson social welfare function

or

Explain Arrows Impossibility theorem

(2×10=20 marks)

Reg. No.....

Name.....

**SECOND SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – VI : EcC006: MACRO ECONOMIC THEORY II  
(CORE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

*Answer **all** questions.*

*Each question carries 2 mark*

1. Explain J-curve effect
2. Explain the determination of fixed exchange rate system
3. Explain absorption approach
4. Explain elasticity approach
5. Differentiate between fixed and flexible exchange rate system
6. Explain Mundell-Flemming model
7. Explain the causes of BOP disequilibrium
8. Explain purchasing power parity theory
9. Explain monetary approach to balance of payments
10. Explain foreign exchange rate system

(10×2=20 marks)

PART B (Short essay)

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Explain Keynesian approach to inflation  
or

Explain structuralist theory of inflation

12. Discuss types of unemployment  
or

Discuss types of inflation

13. Explain short run Philips curve  
or

Explain natural rate of unemployment hypothesis

14. Explain monetary approach to inflation  
Or

Explain the causes of inflation

(4×5=20 marks)

PART C (Essay)

*Answer any two questions.*

*Each question carries 10 marks*

15. Discuss neo-Keynesian quantity constrained model  
or

Discuss the themes of supply side economics

16. Explain real business cycle theory  
or

Discuss instruments of monetary and fiscal policy

(2×10=20 marks)

Reg. No.....

Name.....

**SECOND SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS  
PAPER – VII : EcC007: ECONOMETRICS  
(CORE)**

Time: 3 Hours

Maximum marks: 60

## PART A (Short Answers)

Answer all questions

Each question carries **2** marks

1. State Gauss- Markov theorem
2. Distinguish between time series and cross sectional data
3. What do you mean by indicator variable
4. Distinguish between  $R^2$  Adjusted  $R^2$ .
5. Explain method of Pooling.
6. What do you mean by lagged variable?
7. Explain First Order Auto Regressive Scheme.
8. Distinguish between Theoretical and applied econometrics
9. Distinguish between PRF and SRF
10. Write a short note on Instrumental variable

(10 x 2 = 20 Marks)

## PART –B (Short Essay)

Answer any four questions

Each question carries **5** marks

11. Discuss the methods of detecting auto correlation.

OR

Explain the procedure of conducting Durbin Watson d- test

12. What are the major consequences of Multicollinearity?

OR

Estimate the regression equation of  $Y = a + bX + U$ , and interpret the results:

Y .....	12	14	10	8	9	7
X .....	6	10	8	5	3	4

13. Explain the nature of Simultaneous equation models and distinguish between structural model and reduced form model.

OR

What are the major reasons of Heteroscedasticity?

14. Write a short essay on Methodology of Econometrics.

OR

Briefly describe about the major limitations of Econometrics (4 x 5 = 20 Marks)

PART –C ( Essay)

Answer any two questions

Each question carries **10** marks

15. Discuss the salient features of Dummy Variable Models.

OR

Write an essay on Identification and identify the following demand and supply model for money

$$\text{Money demand} \quad M_d = 2 Y_t + 5 R_t + P_t + U_1$$

$$\text{Money supply} \quad M_s = 3 Y_t + U_2$$

16. Given the following table, estimate the regression equation of  $Y = a + b X_1 + c X_2 + U$  and interpret the results:

Y	20	30	35	40	45
X <sub>1</sub>	10	15	10	20	20
X <sub>2</sub>	5	10	15	10	20

OR

Briefly discuss about the role of Lagged models in Economics

( 2 x 10 = 20 Marks)

Reg. No.....

Name.....

**SECOND SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – VIII : EcC008: FINANCIAL INSTITUTIONS AND MARKETS**

**(CORE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

*Answer **all** questions.*

*Each question carries 2 mark*

1. Explain Real Time Gross Settlement System.
2. What is Offshore Banking?
3. Explain the features of derivatives.
4. What are indicators of financial development?
5. Explain the major objectives of financial system.
6. What are the different types of insurance?
7. State the functions of NBFIs
8. Define Money Market Mutual Funds.
9. Distinguish between call option and put option.
10. What is underwriting?

(10×2=20 marks)

PART B (Short essay)

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Describe the types and functions of global banking.

OR

Explain the promotional role of RBI in capital market.

12. Write a note on recommendations of Narasimham Committee on Financial Sector Reforms.

OR

Discuss the various functions of Stock Exchange.

13. Distinguish between banking and non-banking financial institutions.

OR

Discuss the fund-based financial services.

14. Explain the various Credit Rating Agencies in India.

OR

Explain the objectives and functions of SEBI.

(4×5=20 marks)

PART C (Essay)

Answer *any two* questions.

Each question carries **10** marks

15. What is money market? Discuss the characteristics and problems of Indian money market.

OR

Discuss the structure and growth of developmental financial institutions in India. Explain how it helps in financial development of a country.

16. Explain the role of NBFCs in Indian financial system. Outline the major policy taken by the Government with regard to NBFCs.

OR

What are basic problems in portfolio investment? Give suggestions for managing portfolio.

(2×10=20 marks)



Reg. No.....

Name.....

**THIRD SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – IX : EcC009: INTERNATIONAL ECONOMICS**

**(CORE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

Answer all questions.

Each question carries **2** marks

1. What do you mean by factor intensity reversal?
2. Write a note on Leontief paradox.
3. Differentiate between free trade and protection.
4. Explain how equilibrium exchange rate is determined in a foreign exchange market.
5. Bringing out the impact of devaluation on terms of trade.
6. Write a note on foreign trade multiplier.
7. What is meant by reciprocal demand?
8. Write a note on purchasing power parity theory.
9. State the effects of international capital flows on developing economies.
10. What do you mean by trade deficit?

(10×2=20 marks)

PART B (Short essay)

Answer any four questions.

Each question carries **5** marks

11. Explain the theory of immiserizing growth.

OR

Explain the purchasing power parity theory.

12. Discuss the subject matter of international economics.

OR

Explain Vanek model of customs union.

13. Critically analyse the role of MNCs in developing countries.

OR

Discuss the role of WTO in the development of international trade.

14. Define terms of trade. Explain the determination of equilibrium terms of trade.

OR

Examine the monopolistic competition and international trade based on intra-industry model.

(4×5=20 marks)

PART C (Essay)

Answer any two questions.

Each question carries **10** marks

15. Examine the theories of balance of payment.

OR

What do you mean by optimum tariff? Discuss tariff and non-tariff barriers on international trade.

16. Discuss the Heckscher-Ohlin theory of international trade. To what extent it is superior to the classical theories of trade.

OR

The Ricardian theory of international trade is an improvement upon Adam Smith's theory of absolute cost advantage. Discuss

(2×10=20 marks)

Reg. No.....

Name.....

**THIRD SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – X : EcC010: ENVIRONMENTAL ECONOMICS**

**(CORE)**

Time: 3 Hours

Maximum marks: 60

**PART A (Short answers)**

*Answer **all** questions.*

*Each question carries 2 mark*

1. What is Pareto's optimal welfare?
2. Explain values of biodiversity.
3. What are hazardous wastes?
4. Explain the basic principles of disaster management.
5. Distinguish between renewable and non-renewable resources.
6. Explain conservation of resources.
7. Write a note on environmental ethics.
8. Briefly discuss water conflict in India.
9. Explain the principle of 3R's of waste management.
10. What are the threats to biodiversity?

(10×2=20 marks)

**PART B (Short essay)**

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Explain Full Cost Principle as a tool of tackling international environmental problems.

**OR**

Examine the important ways and methods to reduce Global Warming as part of attitude and approach.

12. Examine the Law of Thermodynamics and its relevance in Environmental Economics.

OR

What are the principles of Economic incentives for tackling international environmental problems?

13. Write a short note on climate change and Agricultural development.

OR

What do you understand by air pollution? Describe its various causes.

14. Explain the scope of Environmental Economics.

OR

Explain the importance of Forest Resources in environmental quality.

(4×5=20 marks)

#### PART C (Essay)

Answer *any two* questions.

*Each question carries 10 marks*

15. What do you mean by natural resources? How would you explain the phenomenon that the renewable resources seem to be becoming scarcer relative to exhaustible resources?

OR

Explain different methods of valuation of the environment. Discuss the role of an economist in environment assessment, management, protection and policy formulations.

16. What are some of the main issues in environmental pollution today? Choose one local problem and explain it.

OR

What is Environmental Impact Assessment? Examine the stages, steps and procedures of Environmental Impact Assessment of a development project.

(2×10=20 marks)

Reg. No.....

Name.....

**THIRD SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – XI : EcE001: PUBLIC ECONOMICS**

**(ELECTIVE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

Answer **all** questions.

Each question carries **2** mark

1. Define Taxable Capacity.
2. What are the objectives of Fiscal Policy?
3. Discuss the sources of Public Revenue.
4. Explain the causes of increasing Public Debt.
5. State the demerits of Direct Tax.
6. Explain the concept of Impact, Incidence and Shifting of Tax.
7. Explain the objectives of Taxation.
8. Explain ability to pay and equity of taxation.
9. What are the canons of public expenditure?
10. Explain Tax shifting and elasticity of demand and supply.

(10×2=20 marks)

PART B (Short essay)

Answer **any four** questions.

Each question carries **5** marks

11. Explain the constitutional provision of Central-State Financial Relations.

OR

What is finance commission? State the functions of finance commission.

12. Explain why there is a need for a fiscal policy to stabilize an economy.

OR

Explain the cannons of public expenditure.

13. Explain the effects of increased government borrowing on an economy.

OR

Explain how externality is a problem of improper allocation of property rights. Can it be solved through mutual bargaining?

14. Explain Peacock-Wiseman hypothesis of public expenditure.

OR

State the major approaches to the optimal provision of public goods.

(4×5=20 marks)

PART C (Essay)

Answer **any two** questions.

Each question carries **10** marks

15. Is disease prevention by the government is a pure public good, impure public good or a private good? Explain.

OR

How large tax rate should the government use in order to eliminate a negative externality? Why does this tax rate work?

16. State three reasons when private provision of public goods is likely to overcome the free Rider problem.

OR

Examine the performance of fiscal policy in India.

(2×10=20 marks)

Reg. No.....

Name.....

**THIRD SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – XII : EcE002: ECONOMICS OF GROWTH AND DEVELOPMENT**

**(ELECTIVE)**

Time: 3 Hours

Maximum marks: 60

**PART A (Short answers)**

Answer **all** questions.

Each question carries **2** marks

1. Bring out the condition for take-off.
2. What are the main criticisms against Lewis theory?
3. What are the limitations of a big-push theory in a developing economy context?
4. Explain the concepts of backward and forward linkages with examples.
5. Explain the measurement sustainable development.
6. Distinguish between public foreign investment and private foreign investment.
7. Define unlimited supply of labour.
8. Explain the role bank in economic development.
9. Explain the features of classical theory of economic development.
10. Explain drive to maturity.

(10×2=20 marks)

**PART B (Short essay)**

Answer **any four** questions.

Each question carries **5** marks

11. Give the critical appraisal of Big Push theory.

**OR**

Explain the significance of choice of techniques in economic development.

12. Explain the Myrdal's strategies on economic development.

OR

Differentiate between public foreign investment and private foreign investments.

13. State the development issues of MNCs in LDCs.

OR

Explain Hirshman's view on economic development.

14. Explain the different indivisibilities and external economies by Rosenstein Rodan.

OR

Explain the weakness of Schumpeter's theory.

(4×5=20 marks)

PART C (Essay)

Answer **any two** questions.

Each question carries **10** marks

15. Examine Marx's view on growth and decline of capitalism and compare it with that of Schumpeter.

OR

Discuss the role of international organizations in the development of third world countries

16. State the significance of capital saving and labour saving techniques in economic development.

OR

Discuss the regional disparities and development policies in India.

(2×10=20 marks)



Reg. No.....

Name.....

**THIRD SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – XIII : EcE003: POPULATION STUDIES**

**(ELECTIVE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

*Answer **all** questions.*

*Each question carries 2 mark*

1. Explain the types of demography
2. Explain the scope of demography
3. Explain the characteristics of Indian population
4. Explain the demographic transition theory
5. Explain optimum theory of population
6. Explain Malthusian theory of population
7. Explain the problem of ageing
8. Explain factors affecting population growth
9. Explain census enumeration method
10. Explain population and economic development

(10×2=20 marks)

PART B (Short essay)

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Explain the measures of mortality rate  
or

Explain the measures of fertility rate

12. Explain the techniques of migration  
or

Explain the factors affecting urbanization

13. Explain the types of migration  
or

Explain the techniques of urbanization

14. Explain uses of life table  
Or

Explain fertility differential

(4×5=20 marks)

PART C (Essay)

*Answer any two questions.*

*Each question carries 10 marks*

15. Discuss the methods of population projection  
or

Discuss the inter relationship between population, environment and health

16. Explain national population policy 2000  
or

Discuss the uses of population data in development planning

(2×10=20 marks)

Reg. No.....

Name.....

**FOURTH SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS**

**PAPER – XIV : EcC011: RESEARCH METHODOLOGY**

**(CORE)**

Time: 3 Hours

Maximum marks: 60

**PART A (Short answers)**

*Answer **all** questions.*

*Each question carries 2 mark*

1. Explain empirical research
2. What you mean by research hypothesis?
3. Explain judgment sampling.
4. Define Social Science Research
5. Probability sampling.
6. Explain qualitative and quantitative research.
7. Mention the content of research report.
8. Explain Multi stage sampling.
9. What is cohort survey?
10. Define data. Explain primary data.

(10×2=20 marks)

**PART B (Short essay)**

*Answer **any four** questions.*

*Each question carries 5 mark*

11. What are the important features of research design?

OR

What are the advantages of non-probability sampling?

12. What is systematic bias and sampling errors?

OR

Compare and explain the merits and demerits of Quantitative and Qualitative research.

13. State the significance of pilot study and pretesting.

OR

Give a brief description on the importance of Hypothesis in social science.

14. Explain the features of a good questionnaire.

OR

State the difference between Pure and Applied Research.

(4×5=20 marks)

PART C (Essay)

*Answer any two questions.*

*Each question carries 10 marks*

15. What is Research methodology? What are the important steps in Research?

OR

Elaborate the significance of a research report and narrate the various steps involved in writing such a report.

16. Explain the need and importance of objectivity and ethics in social science research.

OR

List the data collection tools used in quantitative designs and write in detail about Questionnaire.

(2×10=20 marks)

Reg. No.....

Name.....

**FOURTH SEMESTER M.A.DEGREE EXAMINATION  
ECONOMICS  
PAPER – XV : EcE004: OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS  
(ELECTIVE)**

Time: 3 Hours

Maximum marks: 60

PART A (Short answers)

*Answer all questions.**Each question carries 2 mark*

1. Write down the dual of the following problem

Maximize  $Z=X_1+6X_2$ Subject to  $X_1+3X_2\geq 2$  $X_1+3X_2\leq 3$  $X_1, X_2\geq 0$ 

2. Explain the methodology of operation research
3. Explain the features of linear programming problem
4. Explain degeneracy in transportation problem
5. Explain merits and demerits of simplex method of LPP
6. Find the initial feasible solution to the transportation problem by using north west corner rule

Origins	Destination			Supply
	D1	D2	D3	
O1	2	7	4	5
O2	3	3	1	8
O3	5	4	7	7
O4	1	6	2	14
Demand	7	9	18	

7. Differentiate between slack and surplus variable
8. Explain MODI method
9. Solve the following linear programming problem by using graphical method.

$$\text{Maximize } Z=12X+4Y$$

$$\text{Subject to } 2X+3Y\leq 48$$

$$X+3Y\leq 42$$

$$X+Y\leq 21$$

$$X, Y\geq 0$$

10. Solve the following assignment problem

		Job		
		X	Y	Z
Workers	A	18	17	16
	B	15	13	14
	C	19	20	21

(10×2=20 marks)

#### PART B (Short essay)

*Answer **any four** questions.*

*Each question carries 5 mark*

11. Explain non linear programming problem

or

Discuss Kuchn-Tucker conditions

12. Solve the game by using maximin minimax principle

		Player B		
		Player A	15	2
	6	5	7	
	-7	4	0	

or

Find the optimal strategy by using maximax, minimax, maximin, Laplace and Hurwicz  $\alpha$  criterion

Events	Acts			
	A1	A2	A3	
E1	7	4	5	$\alpha=0.7$
E2	2	6	4	
E3	10	2	8	

13. Explain  $2 \times n$  and  $m \times 2$  games

or

Explain goal programming

14. Explain types of game

Or

Explain EMV and EOL

(4×5=20 marks)

### PART C (Essay)

Answer **any two** questions.

Each question carries **10** marks

15. Table below gives the schedule of welding activities in an assembly shop.

Activity	Duration (days)
0-1	2
1-2	4
0-3	2
2-5	1
3-4	2
4-5	5
5-6	3

- a. Draw the network diagram    b. Calculate TE,TL values, EST,LST,EFT,LFT and total floats  
 b. Mark the critical path and find total project duration.

or

Solve the net work problem by using PERT method

Activity	To	tm	tp
1-2	4	6	5
1-3	5	9	7
2-3	8	12	10
1-4	2	6	4
3-5	4	10	7
4-5	7	15	8
4-6	8	16	12
5-7	4	8	6
5-6	3	7	5
6-8	5	11	8
7-8	6	12	9

16. Discuss time cost trade off analysis

or

Explain inventory model

(2×10=20 marks)