BLUE - Entrepreneurship YELLOW – Employability Green -Skill development

MA Economics

SEMESTER I

BMEC101: MICROECONOMICS: THEORY OF CONSUMER BEHAVIOUR AND FIRM

Total Hours: 90 **Credit: 4**

Learning Objectives

The course is intended to provide a good understanding and base to the students in applying the concepts and methods of microeconomics in the practical field. The broad objectives of the course is to equip the students themselves in a comprehensive manner with the various aspects of the traditional microeconomic theory as well as the latest developments in this field and the applications of theories in analyzing current economic problems and to develop the ability to synthesize knowledge .

Course Outcome

The students should be able to identify how individual economic agents like consumers and firms make rational choices given scarce resources.

They should also get basic understanding about the importance of empirical models and its interpretation

The theoretical tools they learn should help them to equip them to apply it in any of the applied courses later in their degree.

Module I Theory of the Consumer Behaviour (25 hours)

Axioms of rational choice – Utility functions – Indifference curve – MU & MRS – Examples of utility function – Perfect substitutes – Perfect complements – Neutrals and Bads – Quasi linear preferences – Concave preferences – Cobb Douglas Preferences – Homothetic and non-homothetic preferences – Inverse demand functions. Utility maximisation and choice – indirect utility function and consumer's equilibrium - the two good and n good cases, Derivation of the demand function -Engel curve -duality in consumer theory , Revealed preference theory. Strong and weak axioms of revealed preference-derivation of the demand curve. Developments in demand theory-Constant elastic demand function, dynamic versions of demand, linear expenditure system-household time allocation model of Garry S Becker-characteristics model of Kelvin Lancaster-positive and negative network externalities (Bandwagon, Snob and Veblen effects)

Module II Consumers Behaviour under Risk and Uncertainty (20 hours)

Choice under uncertainty- describing risk, expected utility, preferences towards risk-Bernoulli, Neumann and Morgenstern theory, Friedman and Savage hypothesis, Markowitz hypothesis-reducing risk-diversification, insurance, the value of information -the demand for risky assets-behavioural economics

Module III Theory of Production and Costs (30 hours)

Homogeneous and homothetic production function-Homogeneity and Returns to scale-The elasticity of substitution- properties of homogeneous production function -technical progress and production function- equilibrium of a single product firm –Optimal expansion path-equilibrium of a multiproduct firm.

Empirical production functions Cobb Douglas and CES production function and their properties VES production function and translog production function (concept only) - derivation of cost functions from demand function.

Modern theory of cost- -Economies of scale-dynamic changes in costs, economies of scope, learning curve- engineering cost.

Module IV Theory of Firm and Institutions (15 hours)

Nature of the firm and boundaries of the firm (Ronald Coase)- transaction cost approach of Williamson- team production approach by Armen Alchian and Harold Demsetz - hierarchical structure of the firm (unitary form firm-multidivisional form firm - mixed U/M form firms)

Module V Self Study

Invisible hand-Central problems of an economy-opportunity cost –demand, supply. Equilibrium-Changes in demand and supply – Price controls and quota

Case studies- Network externalities, learning curve, Economies of scope, Measurement and reduction of risk in the stock markets.

Prescribed Texts

1. Koutsoyiannis A (1979), Microeconomic Theory (2nd edition), Macmillan, London
2. Pindyck and Rubinfeld (2006) Microeconomics, Prentice Hall of India Ltd, New Delhi
3. Varian H (2000), Micro Economic Analysis, WW Norton, New Delhi
4. Dominic Salvatore (2012), Microeconomics Theory and applications fourth edition, Oxford University Press
5. Maria Moschandreas(1994)Business Economics, Routledge Publisher (for Module 4)
6. Martin Patrick and Visakha Varma G.(2007), An Economic Approach to Social Interactions, Educational Publishers and Distributors, Ernakulam.

Additional References

1. Sampath Murkerjee (2009), Analytical Microeconomics (Exchange Production and Welfare) From Alfred Marshall to John Nash, New Central Book Agency Ltd
2. Henderson A M and Quandt R E (1980) Microeconomic Theory: A Mathematical Approach, McGraw-Hill, New Delhi
3. Jeffrey M Perloff (2012), Microeconomics Theory and Applications with calculus, Pearson Education Inc
4. Gravelle H and R Rees (2004), Microeconomics, Pearson London
5. G C da Costa (2004),Value and Distribution in Neoclassical and Classical Systems, Himalaya Publishing House, Mumbai
6. Sen Anindya (1999), Microeconomics: Theory and Applications, OUP, New Delhi
7. Christopher Snyder and Walter Nicholson (2008), Fundamentals of Microeconomics, Cenage Learning, India edition

BMEC102: MACRO ECONOMIC THEORY AND POLICY

Total Hours: 90 **Credit: 4**

Learning Objectives

Since Macroeconomics would be taught in two parts (I and II), the first part would focus on the Orthodox Macroeconomic Models while the Modern trends in Macroeconomic thoughts would be dealt with in the second part. This course studies the dynamics of fundamental macroeconomic variables and interdependence between them. Basic models of macroeconomics are introduced to analyze economic fluctuation and stabilisation policies. It also touches upon other issues such as the internationalisation of macroeconomics. The primary end of the course is to enable the students to get better acquaintance with nitty –gritty of methods and models of Macroeconomics. There will be a special concern to critically evaluate the validity of these Models to enunciate the changes in these key macroeconomic variables in real economies. Students are exposed to both macroeconomic theory and contemporary macroeconomic issues. The functioning of the economy as a whole is analysed from the point of view of competing schools of macroeconomic thoughts.

Learning Outcomes

Through successful learning of the course materials the students will be able to:

- Demonstrate a good understanding of macroeconomic principles, concepts, and theories
- Demonstrate an understanding of the macroeconomic implications of decisions made by diverse economic entities and the ability to form informed opinions about macroeconomic policies pursued by them.
- Learn to integrate theoretical knowledge to evaluate policy measures and analyse trade-off in the deployment of resources to alternative ends and the implications of those trade-offs for the different strata of the society.

Module I Consumption and Investment: Behavioural Foundations (20 hours)

- Consumption function hypothesis- determinants of consumption- Kuznet's Consumption Puzzle -Fisher's Model of inter-temporal choice- relative income hypothesis – permanent income hypothesis-measurement of permanent income - life cycle hypothesis –consumption and uncertainty.
- Investment demand function- Keynesian theory of investment (MEC)- Post Keynesian theories of investment- MEI-capital stock adjustment principle-accelerator theory-the rigid and flexible versions- neo classical theory of investment-stock market and Tobin's q-ratio.

Module II Basic Macroeconomic Models (25 hours)

- The simple Keynesian Cross model- Extensions of the model.
- IS-LM Model- the interaction of the real and monetary sectors of the economy- the Keynesian version of the IS-LM model-the Neo Classical version of the IS-LM model- fiscal and monetary policy analysis in an IS-LM model- (IS-LM model with government sector) - policy analysis in a Keynesian model- policy analysis in a Neo classical model- fiscal policy and crowding out effect-Ricardian Equivalence- IS-LM model for an open economy.
- AD-AS model- AS and AD curves- classical and Keynesian cases- policy analysis.

Module III Labour Market – Equilibrium with Goods and Money Market - (25 hours)

- Classical unemployment and the labour market- Neoclassical labour market equilibrium- the classical three-sector model- wage-price flexibility and full employment - Pigou effect.
- Keynesian unemployment and labour market- under-employment equilibrium- the Keynesian three sector model- (IS-LM model with labour market) - Keynes effect-real balance effect.
- Search theory- DMP model (Diamond- Mortenson- Pissarides)

Module IV Cycles in Economic Activity (20 hours)

Trade cycles- phases- types- theories -multiplier- accelerator interactions models- Samuelson and Hicks- Kaldor- political business cycle (William Nordhaus) – recent global recession and crisis- Endogenous growth theory

References

Module 1

1. Gregory Mankiw N (2010) : Macroeconomics , 7th Ed, Worth Publishers Chapters 16-17
2. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, TMH, Chapters- 13-14
3. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, MacMillan-Part III-Chapters -12 and 13
4. Richard T Froyen (2008): Macroeconomics- Theories and Policies, Pearson- Chapter-21
5. Garner Ackley (1989): Macroeconomics: Theory and Policy,Collier MacMillan, Chapters16-19
6. A J Westaway and T G WeymanJohnes (1978): Macroeconomics, Theory, Evidence and Policy, Longman, Chapters-4, 5and6
8. Kamran Dadkhah (2010): The Evolution of Macroeconomic Theory and Policy, Springe, Chapter-3
9. Errol D'Souza (2008): Macroeconomics, Pearson, Chapters 3 and 4
10. Andrew B. Abel and Ben S. Bernanke (2010): Macroeconomics, 4th Ed, Pearson, Chapter 4
11. Cobham David L (1987): Macroeconomic Analysis and Intermediate Text, Longman Economic series

Module II and III

1. Lefteris Tsoulfidis: (2010), Competing Schools of Economic Thought, Springer-Chapters 6 and 10-1
2. Gregory Mankiw, N (2010): Macroeconomics, 7th Ed, Worth Publishers- Chapterss 10-11
3. Kamran Dadkhah (2010): The Evolution of Macroeconomic Theory and Policy, Springer, Ch 4
4. Brian Snowdon and Howard R Vane (Ed) (2003): A Macroeconomics Reader, Routledge-Part I, Chapters 2-5
5. Brendan Sheehan (2009) Understanding Keynes' General Theory, Palgrave
6. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, TMH, Chapters 5 and 6
7. Brian Snowdon, Howard Vane and Peter Wynarczyk (2002): A Modern Guide to Macroeconomics: An Introduction to Competing Schools of Thought, EE, Chapters 2, pp42-56 and pp 60- 77
8. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, MacMillan, Chapters-1, 2, 3and4
9. Richard T Froyen (2008): Macroeconomics- Theories and Policies, Pearson-Chapters 6-9
10. Garner Ackley (1989): Macroeconomics: Theory and Policy, Collier MacMillan Chapters 6 -12
11. A J Westaway and T G Weyman Johnes (1978): Macroeconomics, Theory, Evidence and Policy, Longman-Chapters-10, 11 and 12
12. James K. Galbrith and William Darity, Jr (1994): Macroeconomics-Houghton-Part-II –Chapters-4and5
13. Errol D'Souza (2008): Macroeconomics, Pearson. Chapters 8 and 9

14. Andrew B. Abel and Ben S. Bernanke (2010): Macroeconomics 4th Ed. Pearson-Chapters 9
15. Farrokh K. Langdana (2009):Macroeconomic Policy: Demystifying Monetary and Fiscal Policy, Second edition, Chapters 8and9
16. Olivier Blanchard (2011): Macroeconomics 4th Ed- Pearson Chapter 5
17. Cobham David L (1987) Macroeconomic Analysis and Intermediate Text, Longman economic series.

Module IV

1. Kamran Dadkhah (2010): The Evolution of Macroeconomic Theory and Policy, Springer. Ch 8
2. A.J. Westaway and T.G. WeymanJohnes (1978): Macroeconomics, Theory, Evidence and Policy, Longman, Chapter-15
3. M G Mueller Ed (1988): Reading in Macroeconomics. Surjeet Publications Chapter 18
4. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, TMH, pp152-155
5. Samuelson and Nordhaus William D: Macroeconomics, TMH
6. Stanley Bober (1979 and Digital edition2010): Economics of Cycles and Growth, Witely.

Supplementary Readings

1. William H Branson (2005): Macroeconomic Theory and Policy: EWP (Chapters 7,10,11,12,13,18 and 20)
2. Robert J. Barro (1984): Macroeconomics, John Wiley (Chapters 6,8,10,11,17 and 19)
3. The Palgrave Dictionary of Economics 2Rev.Ed (2010) –Edited by Steven N.Darlauf and Lawrence E Blume Vol.1-8 (Online Edition)
4. Jagadesh Handa (2011): Macroeconomics, World Scientific (for all Modules)
5. Eric J Pentacoste (2002): Macroeconomics: An Open Economy Approch. Mcmillan. (Chapters 4, 6, 7, 12, 13, 14 and 15)
6. Edmund S. Phelps (1990): Seven Schools of Macroeconomic Thought:-Arne Ryde Memorial lectures, Clarendon Press
7. Federeic S. Mishkin (2011): Macroeconomics: Policy and Practice, Addion Wesley (For Modules 1,2,3, and 4)
8. O. F. Hamuda (2009): Money, investment and Consumption: Keynes' Macroeconomic Re thoughts) Edward Elgar
9. J E King (Ed) (2003): Elgar Companion to Post Keynesian Economics, EE
10. Breden Shehan (2009): Understanding Keynes'General Theory, Palgrave
11. Horld R William and John Huffnagle (Ed) (1969): Macroeconomic Theory: Selected Readings, ACC, NY
12. M.G. Mueller (1978): Readings in Macroeconomics, Surjeeth Publications
13. Carl Julian Poindexter: Macroeconomics, (1982), Dryden

For original articles browse the following sites: JSTOR, Elsevier, Sage Online, Onlinelibrary.wiley.com and library.oxfordjournals.org

BMEC103: INTERNATIONAL TRADE THEORY AND POLICY

Total Hours: 90 **Credit: 4**

Learning Objectives

The course aims to provide an understanding about the broad principles and theories, which govern the free flow of international trade with the empirical evidence. It would also provide an exposure to the theoretical underpinnings and empirical evidences of the major trade policies followed both at national and international level.

Course Outcome

This course provides a good mix of theoretical and empirical knowledge in international trade and policy It will equip the students with fundamental knowledge in international trade along with their application in real life. The theoretical knowledge on international trade and policy imparted in the course would help them to solve real world problems. It will prepare students to become trade policy-makers and key strategists on trade issues.

Module I Classical Trade Theory **(15 hours)**

Comparative advantage of trade - real and opportunity cost approaches – gains from trade-reciprocal demand (offer curves)- terms of trade and its computation- revealed comparative advantage

Module II Neo- Classical Trade Theory **(20 hours)**

Heckscher-Ohlin theorem – factor-price equalisation theorem – factor intensity reversal-empirical verifications of Heckscher-Ohlin theory – The effect of growth on trade – immiserising growth – Rybczynski theorem – Technical progress and trade – neutral, capital saving, labour saving

Module III Modern Trade Theory **(25 hours)**

Kravis and Linder theory of trade- technology gap theory – product life cycle theory. Intra-industry trade- causes, emergence and measurement- imperfect competition and trade-the Neo-Heckscher -Ohlin models- Neo- Chamberlinian models- Neo-Hotelling models-Krugman Model, oligopolistic models- Brander- Krugman model- Reciprocal Dumping model- - gravity model- Porter Diamond model - empirical work in intra-industry trade-Balassa index- Grubel-Lloyd index, Acquino index- - impact of intra industry trade on developing economies-trade in services.

Introduction to supply chain management (SCM) - impact of SCM on international trade' Trade and economic development- role and significance- Singer- Prebisch Thesis.

Module IV Trade Policy **(30 hours)**

Free trade and protection- effects of tariff – Stolper-Samuelson theorem –Metzler paradox-optimum tariff – effective rate of protection – quotas and other non-tariff barriers- technical/ quality/ safety standards (regulations)- case study on India's exim policy

Economic integration – theory of customs union – partial and general equilibrium analysis – dynamic effects – integration experiences- European Union, Brexit- NAFTA, PAFTA–– regional trade blocs and barriers to free flows of trade- multilateral trade negotiations- the GATT rounds – UNCTAD and evolution of world trading arrangements – World Trade Organization and fair trade- Development Round- Trade Facilitation- Trade War- actions of Trump as a case study

Self Study:

Estimate India's revealed comparative advantage using Balassa index. ASEAN, SAFTA Case study-Exim policy-Trade war: Trump's stance

References

Prescribed Texts

1. Salvatore, D (2008) - International Economics, (8th Edition). Wiley India, New Delhi
2. Appleyard D. R and Field A J (2014) -International Economics (8th Edition) McGraw Hill, New Delhi
3. Krugman P R and Obstfeld M (2009) - International Economics- Theory and Policy, (8th Edition) Pearson, Dorling Kindersley (India) Pvt. Ltd, New Delhi
4. Soderston, B and Reed G.(1994) - International Economics, 3rd Edition, MacMillan Press Ltd. London

Essential Readings

1. Feenstra Robert C (2004), Advanced International Trade- Theory and Evidence, Princeton University Press, Princeton
2. Carbaugh, R J (2008) - International Economics, (11th Edition) Thomson South Western, New Delhi
3. Kindleberger, C P -International EconomicsIIR.D. Irwin, Homewood
4. Bhagwati and Srinivasan (1983), Lectures on international trade, The MIT Press.
5. Bhagwati, J. N. (1987), International trade: Selected readings, Second Edition, MIT Press, Cambridge, Massachusetts
6. Richard E Caver and Harry G Johnson, Readings in International economics
7. Grimwade Nigel (2001), International Trade, (Second Edition), Routledge, London
8. Grubel H G and Lloyd P J (1975), Intra-industry Trade, Macmillan, London.
9. Haberler G (1961), A Survey of International Trade Theory, International Finance Section, Department of Economics, Princeton University.
10. Reinert K A (2012), An Introduction to International Economics, Cambridge university Press, New York
11. Richard Baldwin and Charles Wyplosz (2004), The Economics of European Integration, McGraw Hill, New York
12. A.J. Smit (2010): The competitive advantage of nations: Is Porter's Diamond Framework a new theory that explains the international competitiveness of countries? Southern African Business Review, Volume 14 Number 1
13. Michele Fratianni: (2007) The Gravity Equation in International Trade, Indiana University, Kelley School of Business, CIBER, Bloomington, Indiana 47405, USA.
14. Handbook of International Business,., Oxford University Press
15. Prebisch, Raul (1959). ''Commercial Policy in the Underdeveloped Countries, AER 49, no.2. pp. 251- 73.

BMEC104: ECONOMICS OF DEVELOPMENT AND GROWTH – I

Total Hours: 90 **Credit: 4**

Learning Objectives

This course aims to introduce students to the exciting and challenging subject of development economics, which draws on several branches of economics in order to elucidate and understand the development difficulties facing the economies, especially the developing countries.

The learning objectives of this course are:

- To develop conceptual clarity on the various dimensions of development and to identify the strategic factors in the development of the less developed countries.
- To equip the student community with the theoretical and empirical material for enhancing their capability to address the basic problems confronted by the society.

Course Outcome

Learners who satisfactorily complete this course should be able to explain various development paradigms, theories, approaches and dimensions of development and their indicators. The broad expected outcome is to critically evaluate development paradigms, theories and indicators and demonstrate an understanding of associated implications.

Module I Economic Development – An Overview (15 hours)

Development economics-core values of development-Concepts, approaches and dimensions of development and their indicators; measurement issues; income growth as development, factors influencing growth - human capital and demographic characteristics, structural features and openness of the economy, path dependence-expectations complementarities, political institutions and governance.

Module II Theories of Economic Growth (15 hours)

Classical growth theory (Smith, Malthus and Ricardo)-Schumpeter's analysis of growth- Karl Marx and development of capitalistic economy- Rostow's stages of growth theory-Low level equilibrium trap-Critical minimum effort thesis.

Module III Approaches to Development and Trends in Development Thinking (30 hours)

Doctrines of balanced growth -Unbalanced growth theory- big push theory - Structural change models-Two- sector model of Arthur Lewis, Fei Ranis model-Rural-urban migration-Harris-Todaro model- Todaro paradox- policy implications

Current trends in development theory- critical questions - impasse in development- new international economic order- international interdependence and globalization

Module IV Trade and Development (30 hours)

Trade liberalization- exports and growth-alternative approaches to trade in developing countries- Prebisch-Singer thesis - models of export led growth: neo classical supply side model- BOP constrained growth model – Thirlwall's Law- virtuous circle model- trade liberalization and poverty reduction in developing countries

Political economy of development and underdevelopment- international inequality- centre – periphery thesis - theories of dependence and unequal exchange.

Economic Performance/progress of developing countries over the recent past

East Asian Miracle– Latin American Economic Development – Indian Economic Performance and Reforms – China's economic development and reforms – Africa's Development Experience

Prescribed Texts

1. Ray Debraj (1999): Development Economics, Oxford, University Press.
2. Thirlwall. A P (2009): Growth and Development with special Reference to developing economies Palgrave Macmillan.

Essential Readings

1. Todaro M.P D Smith S.C (2005): Economic development (8th Edition) Pearson Education, Indian branch, Delhi.
2. Szirmai Adam (2015) Socio Economic Development, (2nd edition) Cambridge University Press.
3. De Janvery Alain and Sadoulet Elisabeth (2016) Development Economics Theory and Practice, Routledge
4. Chenery Hollis and T.N. Srinivasan (1988) Handbook of Development Economics - North Holland
5. Weil N David (2013) Economic Growth (3rd Edition) Pearson
6. Nafziger E Wayne (2012) Economic Development (5th Edition) Cambridge University Press.
7. Jones I Charles and Vollrath (2013) Introduction to Economic Growth (3rd Edition) W ,W Norton & Company, New York
8. Meier M. Gerald and Rauch (2000): Leading issues in Economic Development Oxford University Press.
8. Vandana Desai and Robert B Potter: The Companion to development studies-2 nd edition. A hodder viva edn, Viva books Pvt Ltd. New Delhi.
9. Yujiro Hayami and Yoshihisa Godo: Development Economics (3rd Edition) Oxford University Press New Delhi.
10. Ghatak Subrata (1998) : Introduction to Development Economics, Routledge, London.
11. UNDP Human Development Reports (1990- 2017)
12. Smith, Adam (1904), An Inquiry into the Nature and Causes of the Wealth of Nations, London: Methuen and Co., Ltd.
13. Ricardo, David (1911), The Principles of Political Economy and Taxation, J M Dent and Sons.
14. Mill, J S (2011), Principles of Political Economy, Atlantic Publishers and Distributors (P) Ltd.
15. Marx, Karl (1978), Capital, Vol.1-3, Progress Publications, Moscow,
16. Schumpeter, J (1934). The Theory of Economic Development, Cambridge, Mass: Harvard University Press.
17. Myrdal, Gunnar,(1968): Asian Drama: An Enquiry into the Poverty of Nations, Allen Lane, The Penguin Press.
18. Todaro M.P (1991): Economic development in the third Word (4th Edition) Longman, Singapore.
19. Chauduri Ray, Jayasri(2001): An introduction to Development and Regional planning with special reference to India. Orient Longman Kolkata.

BMEC105: QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS – I

Total Hours: 90 **Credit: 4**

Learning Objective

The course in quantitative methods will enable the learners to analyse and interpret various economic theories in the most effective manner. It is a way of demonstrating the importance of economics. This course is expected to be an eye opener to the students for more advanced reading in statistics for quantifying various socio economic problems in the society and the economy.

Course Outcome

Students should be able to formulate economic problems in quantitative terms and applying the relevant tools for analysing economic problems with ease.

Module I Matrices and its applications (30 hours)

Rank of a matrix, Elementary transformations, Equivalent matrices, Elementary Matrices, Normal form of a matrix, Echelon form of a matrix, Computation of Inverse by elementary transformation.

System of linear equations and consistency, solution of non homogeneous and homogeneous system of linear equations. Characteristics roots and vector of a (square) matrix, Cayley-Hamilton theorem and determination of inverse by using Cayley – Hamilton theorem. Vector space - linearly independent/dependent vectors and examples.

Input output Analysis

Module II Differential Calculus (25 hours)

Partial derivatives and examples - total differential, total derivatives and examples. homogeneous function and Euler's theorem and examples -differentials of higher order- signs of partial derivatives and their uses- business and economic applications of partial and total derivatives- Maxima/Minima of functions involving two independent variables Without Constraint, necessary and sufficient conditions for maxima/minima of functions involving more than one independent variable.

Applications Lagrange's method of undetermined multipliers (maxima/minima with constraints) business and economic applications

Module III Integration (15 hours)

Methods of integration - integration by substitution - integration by parts- method of partial fraction and examples - definite integral and area, its properties- application of integration in business and economics – consumers and producers surplus

Module II Introduction to Econometrics (20 hours)

Econometrics: meaning and scope-methodology of econometrics, simple linear regression model, OLS estimation, Gauss Markov Theorem and assumptions, properties of estimates measure of goodness of fit of the model, Testing of hypothesis , reporting of regression results, ANOVA and its applications in regression Analysis

References

1. Chiang, Alpha C (1984): Fundamental Methods in Mathematical Economics, 3rd Edition, McGraw Hill, New York
2. Chiang, Alpha C, and Wainwright Kevin (2005): Fundamental Methods of Mathematical Economics, 4th Edition, McGraw Hill, New York
3. Henderson, J. M., and R. E Quant (1980): Microeconomic Theory; A Mathematical Approach, 3rd edition, McGraw Hill, New York,
4. Bradley, Teresa. And Patton Paul: Essential Mathematics for Economics and Business, 2nd edition, Wiley India
5. Dowling, E.T (1992): Introduction to Mathematical Economics, 2nd edition, Schaum's Outline Series, McGraw Hill, New York
6. Geoff Renshaw (2009): Maths for Economics, 2nd edition, Oxford University Press
7. Kandoi, Balwant (2011): Mathematics for Business and Economics (Volume I), 1st edition, Himalaya Publishing House, Bombay,
8. Gujarati, Damodar (2003), Basic Econometrics, 4th edition, McGraw Hill, New York.
9. Maddala G S (2002), Introduction to Econometrics, 3rd edition, John Wiley and Sons, New York
10. Ramanathan, Ramu (2002), Introductory Econometrics with Applications, Thomson Learning Inc, Singapore.
11. Intrilligator, M. D (1980) Econometric Methods, Techniques and Applications Prentice Hall, Engle wood Cliffs, N. J
12. .Klein L R (1974) A Text Book of Econometrics 2nd Ed., Prentice Hall, Engle wood Cliffs, N.J

SEMESTER II

BMEC206: MICRO ECONOMICS: MARKETS, INFORMATION AND WELFARE

Total Hours: 90 **Credit: 4**

Learning Objectives

The course is intended to provide a good understanding and base to the students in applying the concepts and methods of microeconomics in the practical field. The broad objectives of the course is to equip the students themselves in a comprehensive manner with the various aspects of the traditional Microeconomic theory as well as the latest developments in this field and the applications of theories in analyzing current economic problems and to develop the ability to synthesize knowledge .

Course Outcome

Students are able to identify market forms in real life situations and analyse the pricing decisions and strategies adopted by firms under different market structures. They also should recognize market failure and the role of government in dealing with those failures

Module I Market Structure **(25 hours)**

Imperfect competition- monopoly-monopoly power-measuring monopoly power-Learners Index, Herfindahl Index - sources of monopoly power- rent seeking -bilateral monopoly-monopsony –equilibrium-oligopoly –features- non collusive oligopoly models (Cournot, Bertrand, Chamberlin, Stackelberg)-an overview of traditional collusive oligopoly models (cartel and mergers- price leadership) - modern collusive models- - Game theory -Zero sum game –non zero sum game-Nash equilibrium-prisoner's dilemma, repeated games, sequential games.-decision making under uncertainty criterions-Maximin, Minimax, Regret,Hurwicz and Laplace Criterions

Module II Alternate Theories of the Firm **(20 hours)**

Critique of the classical theory of the firm –the Hall and Hitch report and the full cost pricing principle-Bains limit pricing theory – managerial theories of the firm, Baumol's theory of sales maximization-the behavioral model of Cyert and March- contestable market theory of Baumol

Module III General Equilibrium and Welfare Economics **(20 hours)**

2x2x2 model of general equilibrium- Arrow-Debreu Model

New welfare economics-fundamental theorems of welfare economics-compensation criteria of Hicks, Kaldor, Scitovsky - social welfare function of Bergson and Samuelson – point of bliss- theory of second best- Arrow's impossibility theorem-A K Sen and welfare- Rawls' welfare concept -Easterlin Paradox-equity efficiency paradox.

Module IV Economics of Information **(15 hours)**

Market failure – reasons-externalities- markets with asymmetric information-market for lemons-moral hazard-adverse selection-market signaling –principal agent problem-asymmetric information in labor market-efficiency wage theory –economic theory of property rights –Coase theorem and property rights.

Module V Theories of Distribution **(10 hours)**

Marginal productivity theory of distribution and product exhaustion problem-macro theories of distribution-Ricardo-Marx-neoclassical -Kalecki – Kaldor

Module VI Self Study

Perfectly competitive markets—features equilibrium under short run and long run Case Studies based on market structure

Pollution as externality-Case studies - tradable emission permits Case studies based on moral hazard, principal agent problem

Prescribed Texts

1. Koutsoyiannis A. (1979), Microeconomic Theory (2nd edition), Macmillan, London
2. Pindyck and Rubinfeld (2006) Microeconomics, Prentice Hall of India Ltd, New Delhi
3. Jeffrey M Perloff (2012), Microeconomics Theory and Applications with calculus, Pearson Education Inc
4. Dominic Salvatore (2012), Microeconomics Theory and applications fourth edition, Oxford University Press
5. Sampath Murkerjee (2009), Analytical Microeconomics (Exchange Production and Welfare) From Alfred Marshall to John Nash, New Central Book Agency Ltd
6. Varian H (2000), Micro Economic Analysis, W.W Norton, New Delhi
7. Gravelle H and R.Rees (2004), Microeconomics, Pearson London

Essential Readings

1. Henderson A.M and Quandt R.E (1980) Microeconomic Theory: A Mathematical Approach, McGrawHill, New Delhi
2. G.C de Costa (2004), Value and Distribution in Neoclassical and Classical Systems, Himalaya Publishing House, Mumbai
2. Watson and Getz (1996), Price Theory and its Uses (revised fifth edition), AITBS Publishers, Delhi
3. Sen Anindya (1999), Microeconomics: Theory and Applications, OUP, New Delhi
4. Christopher Snyder and Walter Nicholson (2008), Fundamentals of Microeconomics, Cenage Learning, India edition
5. Layard, P.R.G. and Walters, A.W.(1978), Microeconomic Theory, McGraw-Hill, London.
6. Stigler, G.(1996), Theory of Price, PHI, New Delhi

BMEC207: ADVANCED MACRO ECONOMIC THEORY AND POLICY

Total Hours: 90 **Credit: 4**

Learning Objectives

The advanced macro-economic theory and policy studies the dynamics of fundamental macroeconomic variables and interdependence between them. Basic models of macroeconomics are introduced to examine economic fluctuation and stabilisation policies. It also touches upon other issues such as the internationalisation of macroeconomics. The primary end of the course is to enable the students to get better acquaintance with nitty –gritty of methods and models of Macroeconomics.

Course Outcome

Towards the successful completion of the course the students will be able to appreciate the recent developments in macroeconomics and will get an exposure to Keynesian and post Keynesian theoretical constructs along with the classical notions. The course also gives acquaintance to the modern macroeconomic literature that features dynamic models built upon microeconomic foundations and rational expectations.

Module I Inflation and Unemployment (25 hours)

Classical, Keynesian and Monetarist Approaches to Inflation – Structuralist Theory of Inflation – Inflation targeting.

Phillips Curve – Short run Phillips Curve – Lipsey hypothesis- policy implications.

Long run Phillips curve- Expectations augmented Phillips curve -The Natural Rate of Unemployment– Adaptive Expectations Hypothesis– Policy implications of augmented Philips curve.

Tobin's Modified Phillips Curve- Anti-inflationary Measures.

Module II Modern Developments in Macroeconomics – Within the Classical Framework (30 hours)

Monetarism-Stages in the development of monetarism- An overview of major themes of monetarism.

New Classical Macroeconomics-Rational Expectations Hypothesis- Lucas surprise supply functions-

Intertemporal substitution model – policy Ineffectiveness proposition –The Lucas critique.

Real business Cycle Theory- policy implications.The Dynamically Stochastic General Equilibrium model.

Supply Side Economics- Supply Shocks and Stagflation- Laffer Curve - Policy Implications.

Module III Modern Developments in Macroeconomics – Within the Keynesian Framework (15 hours)

Neo-Keynesian school – Walrasian equilibrium - The reinterpretations of Keynes as non-walrasian equilibrium – Disequilibrium Keynesianism- Robert Clower- Dual Decision Hypothesis.

Axel Leijonhufvud- Co-ordination Failure- Quantity Constrained Model of Malinvaud and Barro (Micro foundations of macroeconomics of non-clearing markets).

Module IV New Keynesian and post Keynesian Macroeconomics (20 hours)

New er-Taylor Contracts Model) – nominal price rigidity (small menu cost model) - real rigidities- real price rigidity (customer markets)- real wage rigidity- efficiency wage hypothesis- implicit contract models- Insider- outsider models- policy implications. Fundamental arguments of Post–Keynesians– Kalecki' pricing model – financial instability model of Hymn Minsky.Money supply-case study

References

Module I

1. Gregory Mankiw, N (2010): Macroeconomics, 7th Ed, Worth Publishers Ch-13.2
2. Kamran Dadkhah (2010): The Evolution of Macroeconomic Theory and Policy, Springer, Chapter4
3. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, TMH-Chapter-6
4. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, MacMillan-Chapters-18 and 20
5. Richard T. Froyen (2008) L: Macroeconomics- Theories and Policies, Pearson-Chapter-11
6. Garner Ackley (1989): Macroeconomics: Theory and Policy, Collier MacMillan, Chapters 13-15
7. A.J. Westaway and T.G. Weyman Johnes (1978): Macroeconomics, Theory, Evidence and Policy, Longman, Chapter-16
8. Andrew B. Abel and Ben S. Bernanke (2010): Macroeconomics 4th Ed. Pearson, Ch 12
9. Olivier Blanchard (2011): Macroeconomics 4th Ed- Pearson, Chapter-8
10. Errol D'Souza (2008): Macroeconomics, Pearson, Chapter-7
11. Cobham David (1987):L Macroeconomic Analysis and Intermediate Text, Longman economic series

Module II

1. Lefteris Tsoulfidis: (2010), Competing Schools of Economic Thought, Springer, Chapters-13, 14 and15
2. Brian Snowdon and Howard R. Vane (*Ed)* (2003): A Macroeconomics Reader, Routledge, Part-II, Chapters 7-10, Part III, Chapters 11-13 and 17-18.
3. Brian Snowdon, Howard Vane and Peter Wynarczyk (2002): A Modern Guide to Macroeconomics: An Introduction to Competing Schools of Thought, EE-Chapters-4, 5and6.
4. Richard T. Froyen (2008): Macroeconomics- Theories and Policies, Pearson-Chapters-10, 12and13.
5. Farrokh K. Langdana: (2009): Macroeconomic Policy: Demystifying Monetary and Fiscal Policy. Second edition, Chapter -10
6. James K. Galbrith and William Darity, Jr (1994): Macroeconomics-Houghton-Chapters-7,8and 9
7. Ben J. Heijdra Frederick van der Ploeg*(2002):* Macroeconomics OUP, Chapter 15
8. Gregory Mankiw,N (2010) : Macroeconomics , 7th Ed, Worth Publishers, Chapter-17
9. Kamran Dadkhah (2010) :The Evolution of Macroeconomic Theory and Policy, Springer, Chapters 7 and 8
10. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, Chapter-8 pp158-177
12. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, MacMillan, Chapter- 19
13. Garner Ackley (1989): Macroeconomics: Theory and Policy, Collier MacMillan
14. A.J. Westaway and T.G. Weyman Johnes (1978): Macroeconomics, Theory, Evidence and Policy, Longman
15. Andrew B. Abel and Ben S. Bernanke (2010): Macroeconomics 4th Ed. Pearson, Chapter- 10
16. P Edgmond (1999): Macroeconomics PIH, New Delhi

Module III and IV

2. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian- Neoclassical Controversies, MacMillan, Chapter-17Brian Snowdon, Howard Vane and Peter Wynarczyk (2002): A Modern Guide to Macroeconomics: An Introduction to Competing Schools of Thought, EE-Chapter-3 pp109-123
3. Lefteris Tsoulfidis (2010): Competing Schools of Economic Thought, Springer, Chapters 12 and16.
4. Ben J. Heijdra Frederick van der Ploeg *(2002):* Macroeconomics, OUP, Chapters-5and13.
5. Ott, D.J, Ott, A.E and Yoo J.H (1975): Macroeconomic theory, McGraw Hill Chapters 17-19
6. M.J.C. Surrey (1976): Macroeconomic Themes, Wily Eastern- Chapter-9
7. Gregory Mankiw, N (2010) : Macroeconomics , 7th Ed, Worth Publishers, Chapter-19
8. Brian Snowdon and Howard R.Vane (*Ed)* (2003): A Macroeconomics Reader, Routledge, Part-V, Chapters-7and19-22
9. Rudiger Dornbusch, Stanley Fisher and Richard Startz (2007) 7th Ed: Macroeconomics, TMH, Chapter-8 pp-180
10. Rosalind Levacic and Alexander Rebmann (2006): Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, MacMillan
11. Richard T. Froyen (2008): Macroeconomics- Theories and Policies, Pearson,Chapter-13 pp311-316
12. Andrew B. Abel and Ben S. Bernanke (2010): Macroeconomics, 4th Ed. Pearson, Chapter- 11
13. James K. Galbraith and William Darity, Jr (1994): Macroeconomics-Houghton,Chapter-10.

Supplementary Readings

1. William H .Branson (2005): Macroeconomic Theory and Policy: EWP (Chapters-7, 10, 11,12,13,18 and 20)
2. Robert J. Barro (1984): Macroeconomics, John Wiley (Chapters-6,8,10,11,17 and 19)
3. The Palgrave Dictionary of Economics 2Rev.Ed (2010) –Edited by Steven N. Durlauf and Lawrence E Blume Vol.1-8 (Online Edition)
4. Jagdish Handa (2011): Macroeconomics, World Scientific (for all Modules)
1. Eric J. Pentecost (2002): Macroeconomics: An Open Economy Approach, Mcmillan.(Chapters 4, 6, 7,12,13,14 and 15)
5. Edmund S. Phelps (1990) : Seven Schools of Macroeconomic Thought:-Arne Ryde Memorial lectures ,Clarendon Press
6. Frederic S. Mishkin (2011) : Macroeconomics: Policy and Practice , Addion Wesley (For Module 1)
7. O. F. Hamuda (2009): Money, investment and Consumption: Keynes' Macroeconomic
8. J.E. King (Ed) (2003): Elgar Companion to Post Keynesian Economics, EE
9. Breden Shehan (2009): Understanding Keynes' General Theory, Palgrave Horld R William
10. John Huffnagle (Ed) (1969): Macroeconomic Theory: Selected Readings, ACC, NY
11. M.G. Mueller (1978): Readings in Macroeconomics, Surjeet Publications

For original articles, browse the following sites: JSTOR, Elsevier, Sage Online, Onlinelibrary.wiley.com and library.oxfordjournals.org

BMEC208: INTERNATIONAL FINANCE

Total Hours: 90 **Credit: 4**

Learning Objectives

This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in a historic cum emerging geo- political context particularly in that of globalization.

Course Outcome

It will equip students both fundamental knowledge in international finance financial institutions along with their application in real life. It will prepare students to become policy-makers and key strategists on issues related to international finance and related institutions.

Module I Foreign Exchange Rates and Markets (30 hours)

Foreign exchange market- structure and functions-the demand for and supply of foreign exchange – fixed and flexible exchange rate-nominal, real and effective exchange rates- Case studies on REER and NEER in India- exchange rate and inflation differential- India as a case Types of foreign exchange transactions-arbitrage, spot and forward markets and rates, currency swaps, futures and options-foreign exchange risks, hedging and speculation -Theory of optimum currency area- Euro currency markets and international bond markets - Currency Board

Determination of exchange rate-theories of exchange rate- mint parity theory-purchasing power parity theory- monetary approach-asset market (Portfolio Balance) approach- FDI approach

Module II Balance of Payments (18 hours)

Balance of payments: concepts-structure-disequilibrium in balance of payments-adjustment mechanisms-devaluation-elasticity and absorption approaches-Marshall-Lerner condition-Monetary approach to balance of payment adjustment-foreign trade multiplier- case study on 1991 BoP crisis in India

Module III Open Economy Macroeconomic Policy (15 hours)

Open economy adjustment policies-internal and external balance-Swan diagram- Greece crisis as a case - assignment problem-Mundell-Fleming Model-combining monetary and fiscal policies

Module IV Resource Movements, Currency Crisis and International Financial Institutions (27 hours)

International labour movements and remittances- ILO- Outsourcing- challenges and Issues - multi-national organizations (MNCs)- International capital movements-FDI and portfolio investments – Indian experience

Currency Crisis- East Asian Financial crisis- Eurozone (debt) crisis

Bretton Woods system: international liquidity and IMF-World bank- international debt problem-new international economic order (NIEO)

Self study

Globalisation and its impact on India- structure of India's BoP- analyse external debt of India using international statistics- implication of impossible trinity in the Indian context-

Reference

Prescribed texts

1. Keith Pilbeam (2013) – International Finance, 4th edition, Palgrave
2. Salvatore, D (2008) - International Economics, (8th Edition). Wiley India, New Delhi
3. Appleyard D. R and Field A J (2014) -International Economics (8th Edition) McGraw Hill, New Delhi
4. Krugman P R and Obstfeld M (2009) - International Economics- Theory and Policy, (8th Edition) Pearson, Dorling Kindersley (India) Pvt. Ltd, New Delhi
5. Soderston, B and Reed G.(1994) - International Economics, 3rd Edition, MacMillan Press Ltd. London

Essential Readings:

1. Feenstra Robert C. (2004), Advanced International Trade- Theory and Evidence, Princeton University Press, Princeton
2. Carbaugh, R. J (2008) - International Economics, (11th Edition). Thomson South Western, New Delhi
3. Kenen Peter B. (2000), The International Economy, Cambridge University Press, New York.
4. Levi Maurice D. (2005), International Finance, Routledge, New York.
5. Ugur Mehmet (2002), (Edited), An Open Economy Macroeconomics Reader, Routledge, London.
6. Reinert K A (2012), An Introduction to International Economics, Cambridge university Press, New York:
7. Thirlwal, A.P (1999), Balance of Payments Theory, 6th edition, Oxford University Press, New York
8. Stern, R.M. (2007), Balance of Payments: Theory and Economic Policy, Aldine Transaction
9. Bhagwati, Jagdish, Arvind Panagariya, and T.N Srinivasan, (2004), "The muddles over outsourcing". Journal of economic perspectives, 18(4): 93-104
10. Ramsaran Ramesh, (1998), An Introduction to International Money and Finance Palgrave
11. Dornbusch and Helmers (1988) Ed, The Open Economy, Oxford University Press, New York.
12. Frankel, J.A. (1993), Monetary and Portfolio Balance Models of Exchange Rate Determination, MIT press, Cambridge
13. Mundell, R A (1962), 'The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability, International Monetary Fund Staff Papers 9, pp. 70 - 79.
14. Fleming, J.M. (1962), Domestic Financial Policies Under Fixed and Floating Exchange Rates, International Monetary Fund Staff Papers 9, pp. 369–379.
15. Radlett, S, and Sachs J. (1998), 'The east Asian Financial Crisis: Diagnosis, Remedies, and Prospects', Brookings Papers on Economic Activity. Vol 28, no.1. pp. 1- 74.

BMEC209: ECONOMICS OF DEVELOPMENT AND GROWTH – II

Total Hours: 90 **No. of Credit: 4**

Learning Objective

The central learning objective of this course is to understand the main concepts, models and issues on economic growth and development.

Course Outcome

Learners who satisfactorily complete this course should be able to explain various development models, indicators and their implications. They will also analyse the inequality, poverty and development interconnections and the impact of population growth on achieving development outcomes.

Module I The Development Gap and the Analysis of Inequality and Poverty (20 hours)

The development gap- dimensions of development gap-concepts of inequality- Global inequality-World bank country classifications and analysis of historical trends- -The Kuznets inverted -U hypothesis- Measures of inequality-Lorenz curve- Gini coefficient-Poverty-measurement of poverty - inequality, poverty and development interconnections.

Module II Models of Economic Growth and the New Growth Theories (30 hours)

Traditional neoclassical growth models-Harrod-Domar model, Solow model Neoclassical critics- Joan Robinson's model- Kaldor-Mirrlees Model

The new growth theories- New endogenous growth theory and macroeconomic determinants of growth- human capital and growth, total factor productivity-Comparative analysis; role of resources, technology and institutions.

The New Institutional Economics and development theory - Political economy and role of the state.

Module III Population and Development (20 hours)

Socio- economic consequences of population growth- pessimistic and optimistic perspectives, Malthusian analyses-Simon's challenge- demographic dividend- optimum population-investment in human capital-education and health care- gender gap in development - the problem of missing women-Strategies for improving education and employment- inclusive growth.

Module IV The Human development Paradigm and Indices of Human Development (20 hours)

The human development paradigm- Sen's capability approach, entitlements, development as freedom- basic need approach.

Measuring Human Development-The Human Development Index (HDI)- Inequality-adjusted Human Development Index (IHDI)-Gender Development Index(GDI)-Gender Empowerment Measure-Gender Inequality Index-Human Poverty Index for Developing Countries (HPI-1)-Human Poverty Index for selected OECD Countries (HPI-2)- Multidimensional poverty index- Human Happiness Index

Prescribed Texts

1. Ray Debraj (1999): Development Economics, Oxford, University Press.
2. Thirlwall. A P (2009): Growth and Development with special Reference to developing economies Palgrave Macmillan.

Essential Readings

1. Sen Amartya, Development: Which Way Now? The Economic Journal, Vol. 93, No. 372 (Dec., 1983), pp. 745-762
2. Todaro M.P D Smith S.C (2005): Economic development (8th Edition) Pearson Education, Indian branch, Delhi.
3. Perotti, R., (1996), Growth, income distribution, and democracy: what the data say, Journal of Economic Growth 1, 149-187
4. Branko Milanovic (2006): "Global Income Inequality: A Review", World Economics, vol.7, No.1, page: 131-157
5. Szirmai Adam (2015) Socio Economic Development, (2nd edition) Cambridge University Press.
6. De Janvry Alain and Sadoulet Elisabeth (2016) Development Economics Theory and Practice, Routledge
7. Chenery Hollis and T.N. Srinivasan (1988) Handbook of Development Economics - North Holland
8. Weil N David (2013) Economic Growth (3rd Edition) Pearson
9. Nafziger E Wayne (2012) Economic Development (5th Edition) Cambridge University Press.
10. Jones I Charles and Vollrath (2013) Introduction to Economic Growth (3rd Edition) W ,W Norton & Company, New York
11. Meier M. Gerald and Rauch (2000): Leading issues in Economic Development Oxford University Press.
12. Yujiro Hayami and Yoshihisa Godo: Development Economics (3rd Edition) Oxford University Press New Delhi.
13. Ghatak Subrata (1998): Introduction to Development Economics, Routledge, London.
14. UNDP Human Development Reports (1990- 2017) Technical Notes (2016)
15. Haughton Jonathan and Khandker R Shahidur (2009) Handbook on Poverty and Inequality, The World Bank, Washington, DC.
16. World Inequality Report (2018) Lucas Chancel, WID
17. Myrdal, Gunnar, (1968): Asian Drama: An Enquiry into the Poverty of Nations, Allen Lane, The Penguin Press.
18. Todaro M.P (1991): Economic development in the third Word (4th Edition) Longman, Singapore.
19. Dev. Mahendra. S (2010): Inclusive growth in India-collected essays. Oxford University press, New Delhi.
20. Chaudhuri Ray, Jayasri (2001): An introduction to Development and Regional planning with special reference to India. Orient Longman Kolkata.

BMEC210: QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS – II

Total Hours: 90 **Credit: 4**

Learning Objective

The course in quantitative methods will enable the learners to have accuracy in framing various economic theories. It also helps to quantify the extent of various socio economic problems in the society and the economy.

Course Outcome

Students should be able to formulate economic problems in quantitative terms and applying the relevant tools for analysing economic problems with ease.

Module I Random Variables and Probability Distributions (25 hours)

Random variables - discrete and continuous types - probability density function and its properties- expectation and moments. Standard distributions –binomial, Poisson, normal and lognormal (computation of probability of events using Binomial, Poisson and Normal distributions) - central limit theorem (without proof) and its applications

Sampling distributions - statistic, sampling distribution – standard error and its uses – Distribution of sample mean, chi-square, t, F distributions – Examples of statistics following these distributions and its applications

Module II Estimation (15 hours)

Estimation – point and interval estimation, properties of a good estimate – confidence interval for mean of a population using small and large samples - confidence interval for difference between means of two populations using small and large samples, confidence interval for population proportion, confidence interval for difference between two population proportions.

Module III Testing of Hypothesis (25 hours)

Hypothesis – Simple and composite hypothesis - null and alternative hypothesis - Type I and Type II errors, significance level and power, concept of P value in testing, test procedure Testing the mean of a population (large and small sample), testing the difference between two means of independent and paired samples, testing the proportion of a population, testing the equality of variances of two populations, testing the independence of two attributes and goodness of fit using chi-square.

Module IV Non Parametric Tests (15 hours)

Significance and introduction to Non Parametric tests, The run test, Sign test, Sign test for paired data, Signed rank test, Kolmogorov-Smirnov test for one sample and two samples, Man Whitney U Test, Wilcoxon signed rank test, Kruskall-Wallis Rank sum test, Friedman's Test

Module V SPSS (10 hours)- Internal Evaluation only.

Performing Data Analysis using SPSS to solve problems in probability distributions, estimation, parametric and non parametric testing and ANOVA and interpreting results.

References

1. Linda Douglas, Marchal G William and Wathen A Samuel: Basic Statistics for Business and Economics, 5th Edition, McGraw Hill International Edn
2. Mendenhall William., Beaver J Robert and Beaver M Barbara (2006), Introduction to Probability and Statistics, 12th Edition, Thomson Brooks/Cole Publishers
3. Gupta S C and Kapoor V K (2014), Fundamentals of Mathematical Statistics, 11th Edition, Sulthan
4. Ross S (1985), A first course in Probability, 3rd edition, Macmillan New York
5. Murray R. Spiegel and Larry Stephens (1999) Schaum's Outline of Statistics, Schaum Series, McGraw-Hill Education
6. Seymour Lipschutz, John J. Schiller (2011), Schaum's Outline of Introduction to Probability and Statistics, Schaum Series, McGraw-Hill Education
7. Andy Field, (2016), Discovering Statistics using IBM SPSS Statistics, Fourth Edition, Sage Publications.

SEMESTER III

BMEC311: INDIAN ECONOMY: ISSUES AND POLICIES – I

Total Hours: 90 **Credit: 4**

Learning Objectives

The learning objective of this paper is to provide the students with a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy and to contribute to the formulation of its policies. In order to achieve this, the course introduces the students to broad contours like the status, issues and policies of the Indian economy at the aggregated (macro) as well as sectoral levels. The discussion of the topics identified for the course, though the time frame is explicitly stated or not, is expected to be done in a long term perspective- the experiences in the pre as well as post reform years, keeping the colonial experience at the background.

Course Outcome

Through the successful learning of the course the student will acquire a good understanding of the present status, emerging issues and policy challenges of the Indian economy. The students will acquire the ability to form informed opinions on India's development experience over the years, particularly in the globalised era. It will equip them with the tools and perspectives to formulate effective policies in India's development.

Module I Economic Growth, Structure and Reforms (28 hours)

Pre- independence development experience-economic transformation in the colonial period-pattern of growth- nature and structure of the economy

Growth in the post- independence era - emerging structure – contribution of different sectors to output , employment and income- growth across regions/ states - national income, methodological issues in estimation-recent revision (2014) -saving and investment, trend and pattern

Institutions in India's Economic growth process, role and significance- planning commission vs NITI Aayog- economic reforms since early '90s- globalisation- inclusive growth, recent policy initiatives

Module II Agriculture (28 hours)

Performance since independence, across crops and zones-institutional structure – land reforms–farm size and productivity-agriculture inputs-technological change in agriculture – sustenance of agriculture growth, - water use and policies- water harvesting-agriculture finance, credit, role of co-operatives-Farm producer Organisation[FPO]-agriculture marketing- post harvest management- agriculture pricing- crop and price supporting programmes -- future trading in agriculture commodities–- WTO and agriculture- trade facilitating centres- agrarian crisis- food security- food subsidy and public distribution system

Module III Industry (20 hours)

Agriculture and industry linkages- industrial policies-evolution of industries in the post-independence period-industrial performance-pattern of growth and structural change-organised and unorganised- industrial stagnation- debates- post-globalisation trends- public sector- performance-privatization and disinvestment-trends in industrial productivity-regional distribution of industries-MSME- evolution –policies and performance-globalisation and technology transfer. financing: industry

Module IV Infrastructure (14 hours)

Industry and infrastructure linkages-initiatives towards industrial infrastructure- industrial clustering- SEZ- financing infrastructure – PPP models.

Status and policies of physical and social infrastructure services- transport-energy – telecommunication – information technology- health and education- infrastructure in the health sector- spatial pattern of infrastructure/ utilities growth.

Self Study

Critical Assessment of Make in India Policy- CCC as an institution that monitors against anti competition- New Pharmaceutical policy

References

1. Aluvalia, I J and IMD Little (Eds) (1999),India's Economic reforms and Development , Oxford University Press , New Delhi
2. Bardhan, P .K .(1999),The Political Economy of Development in India, Oxford University Press , New Delhi
3. Prabhat Patnaik (ed) (2015) Macro Economics, Economics Volume 3, ICSSR Research Surveys and Explorations
4. Ashima Goyal (eds) (2014), Oxford Handbook of the Indian Economy in the 21st Century, Understanding the Inherent Dynamism
5. Chakravarty S, (1987), Development Planning: The Indian Experience, Oxford University Press , New Delhi
6. Datt. R. (2001), Second Generation Economic Reforms in India , Deep and Deep Publications , New Delhi
7. Byres, Trence J (1998), The Indian Economy, Major Debates Since Independence, Oxford University Press , New Delhi

7. Acharya Shanker, Mohan Rakesh (Eds) (2011), India's Economy: Performance and Challenges, Oxford University Press , New Delhi
8. Basu Kaushik, Martens Annemie (Eds) (2011) The New Oxford Companion to Economics in India , Oxford University Press , New Delhi
9. Balakrishnan Pulpare (Eds) (2011) Economic Reforms and Growth in India,(Essays from Economic and Political Economy) Orient Black Swan, New Delhi
10. Srinivasan T N (Eds) (2011) Growth Sustainability and India's Economic reforms , Oxford University Press , New Delhi
11. Vaidyanathan A (2010) Agricultural Growth in India Oxford University Press , New Delhi
12. Narasimha Reddy, Srijit Mishra,(Eds)(2010) , Agrarian Crisis in India. Oxford University Press , New Delhi
13. Yogesh M Kulkarni (2011), Performance of Indian Industrial sector. Shree Niwas Publications, New Delhi
14. Gajendra Haldea (2011) Infrastructure at Crossroads ,Oxford University Press , New Delhi
15. Collection of Essays from EPW, Global Economic and Financial Crisis, Orient Blackswan, New Delhi
16. Varadharajan Sridhar (2012)The Telecom revolution in India- Technology, Regulation and policy, Oxford University Press , New Delhi
17. Atul Kohli (2012) Poverty Amid Plenty in the New India, Cambridge, New York.
18. Dreze, Jean and Amartya Sen (2013) Uncertain Glory: India and its Contradictions, Princeton University Press, Princeton.
19. Tomilson, B.R. (1998) The Economy of Modern India 1860- 1970, Foundation Books, New Delhi.
20. Kumar, Dharma (ed.). (1983)The Cambridge Economic History of India, Cambridge University Press, Cambridge.

21. Ahluwalia I J (1985) Industrial Growth in India: Stagnation Since the Mid- sixties, OUP, New Delhi
22. Narayana D and Raman Mahadevan (ed). (2011) Shaping India: Economic Change in Historical Perspective, Routledge, London.
24. C P Chandrasekhar (ed) (2015) Indian Industrialisation, Economics Volume 1, ICSSR Research Surveys and Explorations
25. EPW (ed) (2018) Quarter Century of Liberalisation in India, 2018
26. Bhaduri, Amit (1973), 'Agricultural Backwardness Under Semi- Feudalism', Economic Journal, March 83 (239): 120- 37.
27. Ramesh Chand, P A Lakshmi Prasanna, Aruna Singh (2011), Farm Size and Productivity: Understanding the Strengths of Smallholders and Improving Their Livelihoods, **EPW** June 25, vol xlvi nos 26 & 27

BMEC312: PUBLIC ECONOMICS

Total Hours: 90 **Credit: 4**

Learning Objectives

The learning objective of this paper is to impart to the students a thorough understanding of the role and functions of the government in a modern economy. The government performs functions different from those of earlier societies in the new liberalized era. The specific learning objectives of the course are:

- To give in-depth knowledge to the students with the issues relating to the role of government in the changing era and the justification for government intervention.
- To impart to the students the nature and theories of public goods.
- To expertise the students with the various aspects of the theory of public choice
- To make the students aware of the recent trends in taxations and budgetary policy.

Course Outcome

This paper help to get a clear idea to the students that the role and functions of governments in modern economy.
How the functions of modern governments differ from earlier governments
This paper would help the students to understand the nature and features of public goods
Also help to get clear idea about general public choice concepts and theories Explain recent trends in taxations and budgetary policies.

Module I Role of Government **(10 hours)**

Pareto optimality - market failure (causes) and rationale for government intervention- role of govt. in organized society– Govt. failure - changing perspectives – public sector and private sector co-operation or competition

Module II Theory of Public Goods **(30 hours)**

Public goods-pure and impure public goods, merit goods, local public goods -provision of public goods -voluntary exchange models – Samuelsson's contribution-Tiebout model-theory of club goods, public goods and market failure - free rider problem-efficiency condition for public goods

Theory of Public choice-problems of preference revelation and aggregation - voting system - Arrow's Impossibility Theorem - An economic theory of democracy – pressure groups and Interest groups - bureaucracy - rent seeking and directly unproductive profit seeking (DUP) activities

Module III Public Expenditure and Public Debt **(20 hours)**

Theories of public expenditure- Wagner's law- Wisemen- Peacock hypothesis –Critical limit hypothesis-principles of evaluation of public expenditure-social cost benefit analysis. Theories of public debt – Classical – Keynesian – Modern- burden of debt - intergenerational equity – Buchanan Thesis.

Module IV Fiscal Policy and Taxation **(30 hours)**

Fiscal policy for stabilization-automatic vs. discretionary stabilization- Keynesian case-compensatory finance- functional finance-Theories of taxation- benefit and ability to pay approaches - theory of optimal taxation –trade off between equity and efficiency - theory and measurement of deadweight losses. Modern theory of incidence.

References

1. J. E. Stiglitz (1986), Economics of Public Sector. Norton
2. Richard A. Musgrave (1989), Public Finance in Theory and Practice McGraw Hill Book Company, New York
3. Duff L. (1997), Government and Market, Orient Longman, New Delhi.
4. R. Goode (1986), Govt. Finance in Developing countries, Tata McGraw Hill
5. Atkinson A and J Stiglitz (1980), Lectures in Public Economics, MCGraw Hill Meir.
6. G.M and Rauch(2000), Leading issues in economic development, OUP
7. Bailey, S.J (2004), Public Sector Economics, Macmillan
8. Pogu T F and L.G Sgontz Government and Economic Choice, an Introduction to Public Finance, Hengton Mul, Boston
9. Qullis. John and Jones Philip (1998), Public Finance and Public Choice, Oxford University Press, Second Edition
10. Jha. R. (1998), Modern Public Economics, Routledge, London.
11. Kaldor , N (1955),An Expenditure Tax, Allen and Unwin

BMEC313: RESEARCH METHODOLOGY AND BASIC ECONOMETRICS

Total Hours: 90 **Credit: 4**

Learning Objective

This course aims to provide the students basic knowledge about the social science research and its relevance in tackling real issues of the society. It also aims to inculcate the ability to develop the skills to work independently, to plan and to carry out a small-scale research project. It also helps in understanding the basic concepts and tools of econometrics, which is commonly used as a research tool. It will also help them to prepare for further studies of econometric methods.

Course Outcome

The Student should acquire the skills to work independently, to plan and to carry out a small-scal research project.
The students should be able to build econometric models to using the economic and business data with appropriate statistical tools and also should be able to interpret the econometric models with ease.

Module I Fundamentals of Research Methodology (30 hours)

Meaning and definition of research-classification of research - Research methods and Research Methodology-Research Process-steps Research problem-Research Design

Sample design-- Types of sampling designs -probability and non- probability sampling methods – Sampling and non-sampling errors- sample size determination techniques. Questionnaire design

Measurement and scaling: Types of measurement scales- Goodness of measurement scales-Validity and reliability-scaling techniques- Paired comparisons-rank order scale– graphic rating-itemised rating-q sorting-constant sum scale-semantic differential scale-stapel scale-likert scale

Samples - Independent and related samples - Dealing with missing data Organisation of Research report-Structure and components- Citation styles

Module II Introduction to Econometrics (25 hours)

Methodology of Econometrics-An overview of simple linear regression model –Reporting regression results-Goodness of fit of the Model- Multiple regression analysis-Assumptions-Interpretation of multiple regression equation- Matrix approach to linear regression analysis-Interpretation of regression coefficients –Multiple coefficient of determination-Adjusted R^2 -Testing of hypothesis in multiple regression model-Regression in the ANOVA framework – Relationship between F and R^2

Regression through origin-Different functional forms of regression models and their uses-scaling and units of measurements

Module III Problems with Regression Analysis (20 hours)

Nature, consequences, identification and remedial measures of problems of Heteroscedasticity, Auto-correlation and Multicollinearity—Model specification and diagnostic testing -Problems of Specification Error-errors in measurement - general criteria for Model Selection

Module IV Regression with Qualitative Variables (15 hours)

Dummy variable regression–techniques and uses-models with qualitative dependent variables- LPM, Logit, Probit and Tobit Models

Module V Data Lab (Self Study)

Introducing Mendeley, the reference management software .Introduction to GRETL and working out the exercises with real data. (For internal evaluation only)

Prescribed Texts

1. William J Goode and Paul K Hatt,(1981) Methods in social Research, McGraw- Hill
2. Gujarati, Damodar (2003), Basic Econometrics, 4th edition, McGraw Hill, New York. (For Modules 1,2,3 and 4)
3. Gujarati Damodar (2011),Econometrics by Example, Palgrave Macmillan
4. Sankar Kumar Bhaumik (2015), Principles of Econometrics A Modern Approach Using Eviews, Oxford University Press
5. Lee C. Adkins (2014) Using gretl for Principles of Econometrics (www.learneconometrics.com/gretl/using_gretl_for_POE4.pdf)

Essential Readings

1. Wilkinson and Bhandarkar, (2002) Methodology and Techniques of Social Research, Himalaya
2. Marc Blaug (1993) The Methodology of Economics, or How Economics Explain, Cambridge University
3. C R Kothari, (2004) Research Methodology, Methods and Techniques, New Age International
4. Koutsoyiannis A (1977), Theory of Economics, Palgrave, New York.
5. Maddala G S (2002), Introduction to Econometrics, 3rd edition, John Wiley and Sons, New York
6. Ramanathan, Ramu (2002), Introductory Econometrics with Applications, Thomson Learning Inc, Singapore.
7. Kmenta, Jan (1976), Elements of Econometrics, 2nd ed. Macmillan, New York.
8. Mukherjee, Chandan, Howard white and Marc Wuyts (1998) Econometrics and Data Analysis for Developing Countries, Rutledge New York.
9. Wooldridge, Jeffrey M, Introductory Econometrics, (2002) Thompson, South Western, USA
10. 11.Gary Koop (2005),Analysis of Economic Data, John Wiley and sons
11. James H Stock, Mark M Watson (2012),Introduction to econometrics (Third Edition), Pearson
12. R Carter Hill, William E Griffiths, Guay C Lim, (2011) Principles of econometrics(fourth edition), John Wiley and sons

SEMESTER IV

BMEC414: INDIAN ECONOMY: ISSUES AND POLICIES - II

Total Hours: 90 **Credit: 4**

Learning Objectives

The learning objective of this paper is to provide the students with a critical understanding of the Indian economy so that they may be able to engage meaningfully in debates regarding the country's economy and to contribute to the formulation of its policies. In order to achieve this, the course introduces the students to broad contours like the status, issues and policies of the Indian economy at the aggregated (macro) as well as sectoral levels. The discussion of the topics identified for the course, though the time frame is explicitly stated or not, is expected to be done in a long term perspective- the experiences in the pre as well as post reform years, keeping the colonial experience at the background.

Course Outcome

Through the successful learning of the course the student will acquire a good understanding of the present status, emerging issues and policy challenges of the Indian economy. The students will acquire the ability to form informed opinions on India's development experience over the years, particularly in the globalised era. It will equip them with the tools and perspectives to formulate effective policies in India's development.

Module I Population and Employment **(15 hours)**

Population- growth pattern, implications- rural urban migration –population policies, trends in employment – unemployment, nature and policies- recent employment generation programmes- changing nature of labour market, reforms

Module II Social and Fiscal aspects **(20 hours)**

Social outcomes-recent trends in the state of social aspects, their implications and policies - Social Progress Index- health and education-poverty- inequality- regional imbalances- child labour- gender- caste-- governance, corruption-water and sanitation-environment- global warming- common property resources -adivasis, rights to forests.

Fiscal deficit, trend and significance-fiscal policies-critical appreciation – central- state fiscal relationships, current finance commission, major recommendations -recent budgets (2 to 3 years)- parallel economy

Module III Financial and External Sector/ Issues **(30 hours)**

Financial system, banking and insurance – capital markets -critical appraisal of monetary and financial sector reforms–financial inclusion-micro-finance - analysis of price behavior, inflationary trends- inflation targeting and monetary policy- interfaces of monetary and fiscal policy- demonetisation- recent experience

Balance of payments, post 90 trends -structure and direction of India's foreign trade- foreign capital flows- FDI and FII-nature, composition, trend and policies -exchange rates, trends – policies

Monitoring Mechanism under Globalisation- SEBI, TRAI, IRDAI

Module IV Kerala Economy **(25 hours)**

Growth and structure- agriculture performance-major challenges-globalisation/ FTAs (WTO, ASEAN) and Kerala's agriculture-industrial growth- -industrial backwardness- hypotheses - policies-service sector, sources of growth- construction, tourism, trade, transport, energy-information technology- migration, dimension, impact –human resources development-emerging issues, policies- unemployment-inequality- environment degradation- sustainable development -fiscal crisis.

Self Study

NRK contribution to Kerala; industrial climate in Kerala; Data Base on India's foreign trade

References

1. Mahendra K Premi (2009), India's Changing Population Profile, National Book Trust, New Delhi
2. Ashima Goyal (eds) (2014) The Oxford Handbook of the Indian Economy in the 21st Century Understanding the Inherent Dynamism
3. Radhakrishna R , Shovan Roy (Eds) (2005) Handbook of Poverty in India, Oxford University Press , New Delhi
4. Jayaraj D, Subramanian S (2010) Poverty, Inequality and Population, Oxford University Press , New Delhi
5. Reetika Khera (2011) The Battle for Employment Guarantee, Oxford University Press, New Delhi.
6. Amartya Sen (2001) Development as Freedom, Oxford University Press , New Delhi
7. Amartya Sen, Jean Dreze (2005) India – Development and participation, Oxford University Press, New Delhi.
8. Ashwini Deshpande (2011) The Grammar of Caste, Oxford University Press , New Delhi
9. Sivaramakrishnan KC, Amitabh Kundu (2007) Handbook of Urbanisation, Oxford University Press , New Delhi
10. Chakraborty, Sudip (2014) Poverty and Human Wellbeing: The Indian Context, Concept Publishing Company, New Delhi.
11. Y V Reddy (2011) Global Crisis, Recession and Uneven Recovery, Orient Blackswan, New Delhi
12. Mahendra Dev S (2010) Inclusive Growth in India Oxford University Press , New Delhi
13. Bhavani T A, Bhanumurthy N R,(2011), Financial Access in Post Reform India, Oxford University Press , New Delhi
14. Mohan Rakesh (Eds) (2011), Growth with Financial Stability, Oxford University Press , New Delhi
15. Mihir Rakshit (2010) Money and Finance in the Indian Economy, Oxford University Press , New Delhi
16. Indra Munshi (ed) (2013) The Adivasi Question, Orient Blackswan, New Delhi
17. Surinder S Jodhka (2012): Village society, Orient Blackswan, New Delhi
18. Uma Kapila(2013) Indian Financial reforms Academic Foundation New Delhi
19. Jayati Ghosh (ed) (2015) India and International Economy. Economics Volume 2, ICSSR Research Surveys and Explorations
20. Rammanohar Reddy (2017) Demonetisation and Black Money, Blackswan.
21. Centre for Development Studies (1975): Poverty, Unemployment and Development Policy, A Case Study of Selected Issues with Reference to Kerala, Trivandrum.
22. George K K (1999), Limits to Kerala Model of Development, CDS, Trivandrum.
23. Mathew Kurian V and Raju John (ed) (2014): Kerala Economy and its Emerging Issues, SPCS, Kottayam, Kerala.
24. Alwin Prakash, Kerala's (2004) Economic Development: Performance and Problems in the Post-Liberalization Period, SAGE Publication
25. K. P Kannan (2011) Agricultural Development in an Emerging Non-Agrarian Regional Economy: Kerala's Challenges, EPW, Feb 26, vol xlvi, no 9
26. Dipankar Dasgupta, (2016), Theoretical Analysis of Demonetisation', EPW, December 17, vol II no 51 ,
27. Rangarajan. C, (2018), Some Issues in External Sector Management, EPW, May 26, vol LIII, No.21.

BMEC415: INDIAN PUBLIC FINANCE

Total Hours: 90 **Credit: 4**

Learning Objectives

The learning objective of this paper Indian Public Finance is to acquaint the students with the recent developments in public expenditure and also in budgeting and public debt in the Indian context. The economics of public enterprises and the recent trends in centre state financial relations is a highlight of this paper.

Course Outcome

Towards the successful completion of the course, the students will get a clear idea about the recent developments of public finance in India and able to describe and explain various public expenditure and public debt distribution in India.
And also help to understand the centre- state financial relations

Module I Basics of Budgeting **(20 hours)**

Budgeting- Performance, Programme and Zero Base Budgeting (concepts only) –stages involved in the preparation, presentation and execution of budget in India–deficit concepts-problem of fiscal deficit –corrective measures-FRBM Act-ERC Growth and composition of public debt of the Central Government and State Governments-external debt of India. Management of debt in India

Module II Public Revenue and Expenditure **(30 hours)**

Constitutional provision with regard to taxation and public expenditure in India. Indian tax system- Revenue of the union, states and local bodies- Major taxes in India: tax base, direct and indirect taxes, taxation of agriculture, expenditure tax, taxes on services-Non-tax revenue of centre, state and local bodies. Tax Reforms in India-Chelliah committee report – Kelkar committee report I and II –Recent trends-
DTC-Incidence of major taxes in India - VAT - CENVAT-GST. Issues of subsidies in India – Black money.
Structure and growth of public expenditure of Centre and States - Developmental and non developmental –plan and non-plan expenditure.

Module III Public Enterprises **(15 hours)**

Public Enterprises- Role of public sector undertakings (PSUs) –pricing policies - Peak load pricing - Administered Price Mechanism (APM) - public pricing and environmental policy – changing attitudes towards Public enterprises – Privatization of PSUs'- Disinvestment of lis Indian PSUs–Public Private Partnership (PPP) policy.

Module IV Fiscal Federalism **(25 hours)**

Theories of multilevel finance – Principles of federal finance –Indian Fiscal Federalism-Cooperative feera Fiscal imbalances-Intergovernmental transfers - efficiency basis – equity arrangements –major issues in centre – state financial relations in India – vertical and horizontal imbalances – Finance commission and evaluation of its working. an evaluation of the current Finance Commission –criteria of devolution –– Modified Gadgil formula – cooperative federalism- Problem of Central loans to States in India – local finance – Changing role of local self-governments - State Finance Commission and financial resources of Panchayati Raj Institution – Liberalization, economic reforms and centre-state relations in India

Module V Self Study

Budget Analysis

References

1. J. Mishan (1982) Cost – Benefit Analysis Allen Unwin
1. Anuradha Basu (1995) Public Expenditure decision making The Indian Experience Sage Publications New Delhi
2. Peacock, A. and D .J. Robertson (1963) Public Expenditure: Appraisal and Control,

Edinb: Oliver & Boyd Publication

3. Musgrave and Musgrave (1973) Public Finance in Theory and Practice Economic survey, GOI various Years
4. Handbook on Indian Economy, various Issues
5. Misra and Puri (2010) Indian Economy, Himalaya Publishers
6. Chelliah Raja J (1960) Fiscal Policy in Underdeveloped Countries, George Allen and
7. Unwin, London

BMEC416: ENVIRONMENT AND NATURAL RESOURCE ECONOMICS

Total Hours: 90 **Credit: 4**

Learning Objectives

1. To make the students understand the economic and ecological principles essential for a clear understanding of the complex contemporary environmental and natural resource issues and policy considerations.
2. To explore the theoretical foundations of environmental economics.
3. To analyze the Sustainable Development Goals and their implications for both developed and developing countries

Course Outcome

Learners who satisfactorily complete this course should be able to explain multidisciplinary nature of environmental studies, economic incentives for environmental protection, and various approaches of environmental valuation. It will enhance the ability of the learner to think and act for the sustainable development of the economy.

Module 1 Introduction to Environmental Economics (20 hours)

Environmental Economics-Multidisciplinary nature of environmental studies- Inter linkages between the economy and the environment - resource scarcity and the material balance- laws of thermodynamics– production and consumption – development vs. environment-Fundamental theories of environmental economics- Pareto Optimality and competitive equilibrium

Module 2 Economics of Natural Resources and Sustainable Development (30 hours)

The concept of natural resources**-** Natural resource types and classification - Renewable natural resources (economic and biological efficiency level) - the maximum sustainable yield (MSY) -Non-renewable natural resources (discount rate) - Biodiversity loss- Population and its impact on resource utilization and environmental quality

Institutional Framework: Community participation and management of resources

Concept of sustainable development- club of Rome- Rio summit 1992, World Summit on Sustainable Development-2002-Rio+20, Millennium Development Goals (MDGs)-Sustainable Development Goals (SDGs), implications for both developed and developing countries- approaches, and indicators of sustainable development – measuring sustainable development-strong and weak sustainability-strategies of sustainability.

Module 3 Market Failure, Externalities and Economic Incentives for Environmental Protection (25 hours)

Market failure- incomplete markets- environmental public goods, non exclusion and non rivalry -externality and inefficiency - pollution as an externality--methods of abatement of externalities, Pigouvian tax, subsidies - The Coasian property rights approach, emissions standard, emissions charges, tradable pollution permits, recycling- Common pool resources-Tragedy of commons -asymmetric information – problems of free rider and moral hazard – transaction costs- Environmental Kuznets curve.

Module 4 Economics of Environmental Valuation (15 hours)

The concept of total Economic value-use value, non-use value, option value, bequest value Direct methods of valuation- The contingent valuation method (CVM), stated preferences Neo classical theory of environmental valuation-WTP and WTA approaches- Indirect methods of environmental valuation- Travel Cost Method, Hedonic Price Method. Environmental Accounting- Integration of Environmental Accounts with System of National Accounts – Environmentally corrected GDP- Green GNP. Environmental Impact Assessment (EIA).

Prescribed Texts

1. Hanley Nick, Jason F Shogren and Ben White (1997) Environmental Economics in Theory and Practice, Macmillan Press Ltd, London
2. Kolstad Charles D (2006) Environmental Economics, Oxford University Press, New York.

Essential Readings

1. Geoffrey Heal (2012) "Reflections- Defining and Measuring Sustainability" Review of Environmental Economics and Policy Vol 6 , No. 1 p. 147-163.
2. Hussen Ahmed M (2005) Principles of Environmental Economics, Routledge, London
3. Gopalakrishnan Chennat (Ed) (2000) Classic Papers in Natural Resource Economics, Palgrave Macmillan
4. Endres Alfred, Volker Radke (2018) Economics for Environmental Studies, Springer
5. Phaneuf Daniel J , Till Requate (2017) A course in Environmental Economics: Theory, Policy and Practice, Cambridge University Press.
6. Perman Roger ,Yue Ma ,James McGilvray, Michael Common (2003) Natural Resource and Environmental Economics, Pearson Education Limited
7. Grafton R. Quentin, Wiktor Adamowicz, Diane Dupont, Harry Nelson, Robert J. Hill and Steven Renzetti (2004)The Economics of The Environment and Natural Resources, Blackwell Publishing, USA.
8. Karl-Göran Mäler And Jeffrey R. Vincent (2002) Handbook of Natural Resource and Energy Economics
9. Maureen L. Cropper and Wallace E. Oates, (1992) Environmental Economics: A Survey, Journal of Economic Literature, Volume 30:675-740.
10. Robert N. Stavins (Ed.), (2005) Economics of the Environment: Selected Readings, W.W. Norton, 5th edition

ELECTIVE COURSES: GROUP A
BMEC3E01: MATHEMATICAL ECONOMICS

Total Hours: 90 **Credit: 3**

Learning Objective

Mathematics is essential in the expression and communication of ideas in economics. As a way of demonstrating the importance of mathematics in economics, the mathematical concepts already studied will be illustrated with applications in economics.

This course, it is expected, is an eye opener to the students for more advanced reading in Mathematical Economics for quantifying various socio economic problems in the society and the economy.

Course Outcome

Students should be able to formulateeconomic problems in mathematical terms and applying the relevant tools for analysing economic problems with ease.

Module I Theory of Consumer Behaviour (30 hours)

Utility Functions – Direct, indirect –Homogeneous and homothetic utility functions – Utility frontier – Hicksian ordinal utility approach – Consumer equilibrium – Demand functions –Ordinary and Compensated- Engel's Law – Estimation of non-linear demand functions – Slutsky equation income, substitution, and price effects, – Revealed Preference theory – Constant Elastic Demand Function- Linear expenditure systems

Module II Theory of Production (20 hours)

Production function-homogeneous and nonhomogeneous, Euler's Theorem, cost functions and cost curves, properties of Cobb-Douglas, CES and Translog production functions, Producer equilibrium. Derivation of the cost functions from the production function.

Module III Price and Output Determination (20 hours)

Equilibrium under discriminating monopoly, Multi plant model, Cournot and Stackelberg models, Price leadership model, Baumol's static model of sales maximization, Williamsons model.

Module IV Macro Models (20 hours)

National income models (closed and open economy model),- National income from input output model- IS-LM model, Samuelson Multiplier-Accelerator Interaction Model

Prescribed Texts

1. Microeconomic Theory –A mathematical Approach, James M Henderson, Richard E Quant, Mcgraw Hill Education Private Limited New Delhi, Chapter 2
2. Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, Mc Graw
3. Edward T Dowling, Introduction to Mathematical Economics, Schaum's Outlines, Mcgraw Hill

Essential Reading

1. Allen, R.G.D. (1976), Mathematical Economics, Macmillan, London.
2. Arrow, K. J. and M. Intrilligator (Eds.)(1982), Handbook of Mathematical Blackwell, London.
3. Chung, J.W. (1993), Utility and Production: Theory and Applications, Basil

BMEC3E02: OPERATIONS RESEARCH

Total Hours: 90 **Credit: 3**

Learning Objectives

This course introduces students to the theoretical framework of operations research models. It also aims to provide an in-depth understanding of the methodology of OR and its applications in diverse fields in making effective decision making.

Course Outcome

Students should be able to Identify and develop operational research models from the verbal description of the real system.
They should be capable to understand the mathematical tools that are needed to solve optimisation problems.
They should be capable to understand the mathematical tools that are needed to solve optimisation problems.

Module I **(5 hours)**

Operations research-meaning nature and scope –OR models-limitations of operations research.

Module II **(25hours)**

Linear programming-Uses and applications- formulation of LPP model-Graphical method simplex method-artificial variable and Big M method- duality in LPP-duality theorem, - economic interpretation, constructing dual from primal-sensitivity analysis in Linear programing-Shadow Pricing

Module III **(20 hours)**

Transportation and assignment problems-north west corner method-least cost method-Vogel's Approximation- method MODI method-Assignment problems-solutions

Module IV **(15 hours)**

Game theory-pure strategies-Games with saddle points-Solution of games without saddle point-rule of dominance, graphical method

Module V **(25 hours)**

Project management-Network analysis-PERT and CPM -Investment decision analysis-Technique of investment analysis-deterministic inventory models-Queuing theory

Prescribed Texts

1. Kantisaroop, P K Guptha, Manmohan (2009), Operations research, S. Chand Publications, New Delhi
2. Sharma J K (2011), Operations Research Theory and Applications, Macmillan Publishers India Ltd.

Essential readings

1. C. R. Kothari, Quantitative Techniques, Vikas Publications, New Delhi.
2. W.J. Baumol, Economic Theory and Operation Analysis, Englewood Cliff, Prentice Hall, NJ.
3. Ackoff R L and Saienni M W, Fundamentals of Operation Research, Wiley, New York.
4. Hadley, G. Linear programming, Addison Wiley, Massachusetts.
5. Morse P M, Queeing, Inventory and maintenance, Wiley, New York.
6. Srivastava U.K, Shenoy G.V, and Sharma S C, Quantitative Techniques for Management Decisions, Wiley Eastern, New Delhi.

BMEC3E03: MONETARY THEORY AND POLICY

Total Hours: 90 **Credit: 3**

Learning Objective:

The first module enables the students to understand the basic concepts regarding money and the functioning of a pecuniary economy.

The second module capacitates the students to have a thorough understanding of the various theoretical approaches to the determinants and measures of money supply and its role in causing the business cycles.

The third module gives the students an insight in to the different schools of thought regarding the demand for money.

The fourth module gives the students awareness of the monetary policy formulations, its targets and objectives and to create an interest in the recent monetary reforms initiated in India. An earnest attempt is made to give an insight to the present global financial crisis.

Course Outcome

Towards the successful completion of the course the students should be able to describe and explain the main channels of the monetary transmission mechanism, through which monetary policy can have real effects on the economy. The students also able to understand why people hold money and why it is used in the trading process solve macroeconomic models. The students also should acquire the potential to discuss the merits and disadvantages of different monetary policies used by Central Banks. The student should know how to solve macroeconomic models and assess the role and efficacy of monetary policy for various types of models in both the Classical and Keynesian.

Module I Introduction (15 hours)

The importance of money- the static and dynamic functions of money-basic concepts-money, credit, near money, financial system, financial institutions, financial markets, monetary and non-monetary financial intermediaries- NBFIs and money supply-NBFIs and monetary policy.

Module II Demand for Money (30 hours)

Theories of demand for money-classical approach, neo classical approach, Keynesian- Post Keynesian theories of the demand for money-James Tobin, William J. Baumol, Milton Friedman and Markovitz.

classical dichotomy-neutrality of money- integration of value theory and monetary theory-Patinkin's monetary model- real balance effect- monetary transmission mechanisms of classical, Keynesian and Friedman.

Module III Supply of money (20 hours)

Components of money supply- measures of money supply- the mechanistic and behavioural models of money supply- high powered money- money multiplier- the endogeneity and exogeneity of money supply- money supply determination in an open economy- measures of money supply in India.

Money supply and business cycles- Hawtrey, Hayek and Friedman.

Module IV Money, Interest Rates and Monetary Policy (25 hours)

Theories of interest rates- classical, Neo classical and Keynesian- Wicksells contribution-natural Vs market rate of interest-Structure of interest rates-theories of term structure of interest rates.

Goals, objectives, indicators of monetary policy- Monetarism v/s fiscalism- Monetarist

fiscalist debate on policy activism- rule v/s discretion- Taylor rule- Monetary targeting and

inflation targeting- targeting exchange rates.

RBI and monetary management in India.

Monetary reforms in India- Chakravarty committee –Narasimham committee- Basel norms and Indian commercial banks-global financial crisis-genesis, components and impact on India.

References

Module I

1. Suraj B. Gupta(2004) Monetary Economics, S Chand and Co Delhi
2. L M Bhole (1999), Financial Institutions and Markets,Tata McGraw-Hill.
3. V M Avadhani, Studies in Indian Financial System
4. Gurley, J. and E.S. Shaw (1960), Money in a Theory of Finance, Brookings Institution, Washington.

Module 2

1. Laidler David E (1977), The Demand for money: Theories and Evidence, Dum-Don Valley, New York.
2. S C Patnaik (1981), Supply and Demand for money: An equilibrium Analysis, Sterling Publ. Private Ltd., New Delhi
3. D G Pierce and D M Shaw (1985), Monetary Economics: Theories, Evidence and Policy. Butterworth-Heinemann Ltd, Oxford.
4. Don Patinkin, (1989) Money Interest and Prices:An Integration of Monetary and Value Theory,MIT Press.
5. Levacic and Rebmann (1986) Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, Macmillan
5. Shrivastava , NN (1986)New Dimensions in Monetary Theory
6. Jagdish Handa (2000) Monetary Economics, Routledge
7. Friedman, M. (1956), Studies in the Quantity Theory of Money, The university of Chicago Press, Chicago.
8. Keynes, J.M. (1936), The General Theory of Employment Interest and Money, Macmillan, London.
9. Mckinen, G.E. (1978), Money, The price Level and Interest Rates, Prentice Hall of India, New Delhi.
10. Suraj B Gupta (2004), Monetary Economics. Tata McGraw-Hill

Module III

1. Levacic and Rebmann (1986) Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies, Macmillan
2. Suraj B Gupta (2004), Monetary Economics. Tata McGraw-Hill
3. Chakravarthy, S.C. (1985), Report of the Committee to Review the Working of the Monetary System, Reserve Bank of India, Bombay.

Module IV

1. Myron B Glovin, Marie Elizabeth Sushta, Money and Economic Activity
2. Michael R Bayes and Denni S W Jansen, Money, Banking and Financial Markets
3. Mervyn K. Levis and Paul D. Mizen, Monetary Economics, OUP
4. Rakesh Mohan, (2011) Growth with Financial Stability, OUP
5. Reddy, Y.V. (2000), A Review of Monetary and Financial Sector Reforms in India-

Additional Reading List

1. Thomas F Cargill, Money, The Financial System and Monetary Policy, Prentice Hall
2. Charles N. Henning, Willy William Pigott and Robert Haney Scott,(1974) Financial Markets and The Economy, Prentice Hall.

BMEC3E04: ECONOMICS OF HEALTH AND EDUCATION

Total Hours: 90 **Credit: 3**

Learning Objectives

The main objective of the course is to introduce the relevance of health and education in the context of development. The course also equips students to have an understanding of the major concepts, approaches and strategies of health economics. It seeks to provide valuable insights into how far challenges to human health are detrimental to economic development. Also it offers students an opportunity to examine the need to change many of the existing consumption habits and living styles for better sustainability.

Course Outcome

Towards the successful completion of the course, the student will be able to build the rationale and strategies based on the economic valuation of health care and the educational system.

The student should be capable of developing as well as promoting healthy food habits and lifestyle for a sustainable future generation. Also they should be able to make sustainable educational planning contributing to economic growth.

The course enables the student to make an evaluation of the present health and educational system in India and should able to put suggestive measures to correct the existing bottlenecks.

Module I Introduction to Health Economics: Defining Health Economics (25 hours)

Importance of Health Economics – Essential Features. The role of health in economic development – health as human capital. Concepts: Health, Health Care, Birth rate, Fertility rate, Death rate, IMR, CMR, MMR, Morbidity rate (Acute and Chronic), Disability Adjusted Life Year (DALY), Quality Adjusted Life Year (QUALY), Sex Ratio. Human Capital theory. Demand and Supply of Health Care: Demand for Health Care – Case of Health Care Accessibility-Physical and financial, Utilization level – Socio Economic and Cultural Features. Determining health Status, pricing of health care, Health Care Delivery System

Module II Health Financing and Policy (15 hours)

Health expenditure- Public & Private – Direct and Indirect – Health Insurance – Concept of User Cost. Relationship between health insurance and medical services-The role of subsidies to health sector – Health Policy of WHO. National Health Policy and planning – NRHM, Health as a State Subject. – implications of GATS for health sector and financing – Role of NGOs in health care –inequalities of health and health care in India.

Module III: Government, Health and Medical Care (15 hours)

Reasons for government intervention- health care expenditure in India and Kerala- Issues and Challenges- Institutional issues in health care delivery in India and Kerala. Health Statistics in India and Kerala: Infrastructure and Health Status of India & Kerala using information from NSSO, NFHS, CRS and SRS.

Module IV Introduction to Economics of Education (15 hours)

Definition and scope of economics of education- Human capital: the concept- Historical developments in the human capital theory- components of human capital - PQLI and HDI-investment in human capital – contribution of education to economic growth

Module V Costs and Benefits of Education (10 hours)

Cost of education- expenditure on education, private and social costs, direct and indirect costs, benefits of education- private and social benefits, direct and indirect benefits- problems in measurement of cost and benefits- efficiency and productivity in education

Module VI Educational Planning (10 hours)

Educational planning and policy economic growth – educational financing, resource mobilisation, pricing and subsidies- educational expenditure and planning in India and Kerala- Role of NGOs in education- Implications of GATS on Indian education and financing.

Prescribed texts

1. Henderson, J.W, -Health economics and Policy
2. Panchamukhi, P.R, -Economics of Health: A trend report in ICSSR, A survey of Research in Economics, vol.V1, Allied Publishers, Delhi

References

1. Becker, G.S, (1972) Human Capital, 2nd edition, NBER, New York
2. Baru, R.V., Private Health Care in India
3. Folland- Goodman-Stano, The economics of health and health care
4. World Bank (1983), The World Development Report: Investing in Health, Oxford University Press, N.Y
5. Blaug, M.(1972) An Introduction to Economics of Education, Cambridge University Press
6. Schultz, T.W, Economic value of education
7. George Pascharopoulos (1985) Education for Development, Oxford University press, N.Y
7. Jagannath Mohanty, Modern Trends in Education
8. K.K. George and N. Ajith Kumar, (1999) What is wrong with Kerala‘s education system? CSES w.p. No.3
9. Alwin Prakash & Prabhakaran Nair (Ed). (2008) Kerala‘s Development issues in the New Millennium, serials Publication, New Delhi

ELECTIVE COURSES: GROUP B
BMEC4E01: ECONOMICS OF AGRICULTURE

Total Hours: 90 **Credit: 3**

Course Objective

This course aims to provide a firm theoretical foundation in agricultural economics to help the students in understanding the agrarian realities of the developing economies.

Learning Outcome

In this direction, it familiarises the students with various theories of agricultural development, theories of peasant economy, the basics of farm management and production economics and provides insights to some of the theoretical and empirical debates on the agrarian economy of India.

Module I Approaches to Agricultural Development (15 hours)

Role of agriculture in economic development - Theories of agricultural development – Schultz, Mellor and Lewis - interrelationship between agriculture and industry- Role and need for agro-based industries.

Module II The Agrarian Question and Peasant Economy (30 hours)

The Agrarian Question: from Classic to Current Debates – Karl Marx, Engels, Kautsky and Lenin, Lenin-Chayanov Debate, Nicolai Bukharin and Preobrazhensky, the debates on agrarian transition – Dobb-Sweezy-Brenner debate – The Problematics of Agrarian Question: contributions by Byres and Bernstein - Globalisation and Agrarian Question.

Features of Peasant Societies, Elements of Peasant Political Economy, Theories of Optimizing Peasant (profit-maximizing peasant, risk averse peasant, drudgery averse peasant, and sharecropping peasant).

Module III Farm Management and Production Economics (25 hours)

Farm management – Principles - Farm management decisions -principles of factor substitution -cost principles - opportunity cost principle - principles of comparative advantage- limitations of farm management. Agricultural production functions – Production Relationships: factor-product relationships, product-product relationships, and factor-factor relationships – agricultural supply response models (Cobweb and Nerlove models).

Module IV Theoretical and Empirical Debates on the Agrarian Economy of India (20 hours)

Farm size and productivity, the mode of production debate in Indian agriculture, neo-liberalism and the newly emerging debates, agricultural diversification, Agriculture Finance, Agriculture Marketing in India.

Prescribed Texts

1. Ellis, Frank Peasant Economics (Cambridge University Press, 1963).
2. Akram-Lodhi, A. Haroon, Christobal Kay (2010a), "Surveying the Agrarian Question (Part 1): Unearthing Foundations, Exploring Diversity", *Journal of Peasant Studies*, 37(1), pp. 177-202
3. Akram-Lodhi, A. Haroon, Christobal Kay (2010b), "Surveying the Agrarian Question (Part 2): Current Debates and Beyond", *Journal of Peasant Studies*, 37(2), pp. 255-284.
4. Bilgrami, SAR An Introduction to Agricultural Economics (Himalaya Pub. House, Bombay).
5. South-Worth, H.M. and B.F. Johnston (ed.) Agricultural Development and Economic Growth (Cornell University Press, London, 1974)

Essential Readings

1. Heady, E.O. Economics of Agricultural production and Resources Use (Prentice Hall India Ltd. New Delhi-1964).
2. Schult, T.Z. Transforming Traditional Agriculture (Yale University Press, 1964).
3. Metacalf D. The Economics of Agriculture.
4. Basu, K. Agrarian Structure and Economic Under Development (Harwood Academic, London, 1980).
5. Mellor, J.W. The Economics of Agricultural development (Vora and Co. Bombay, 1966).
6. Donner, Peter: Land Reforms and Economic Development.
7. Kahlon, A.S. and Tyagi, D.S. Agricultural Price Policy in India (Allied Pub. New Delhi, 1983).
8. Patnaik, Utsa (ed) Agrarian Relations and Accumulation. The mode of production in India.
9. Rudra Ashok Indian Agricultural Economics: Myth and Realties (Allied Pub. New Delhi 1982).
9. Frankel, Francis, R India's Green Revolution, Economic Gain and Political Costs (OUP Bombay 1971).
10. Dantwala, M.L. (ed.) Indian Agricultural Development since Independence.
11. Ellis, F. Agricultural Policies in Developing Countries.
12. Lekhi R.K. & Singh Joginder, Agricultural Economics, Kalyani Publishers, New Delhi.
13. Sankhayan P.L., Introduction to the Economics of Agricultural Production, Prentice Hall of India Private Limited, New Delhi.
14. Johl S.S. & Kapur T.R., Fundamentals of Farm Business Management, Kalyani Publishers, Ludhiana.
15. Reddy S. Subha, Raghu Ram P. Sastry T.V. Neelakanta & Devi Bhavani, Agricultural Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi
16. Acharya S.S. & Aggarwal N.L., Agricultural Prices – analysis and policy, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi.
17. Shanin, T (ed.) (1987), Peasants and Peasant Societies, 2nd Edition, Blackwell.
18. Ellis, Frank, Peasant Economics, Chs. 1, 3, and 4 to 9, CUP, 2nd Edition, 1993.
19. Akram-Lodhi, A. Haroon, and Cristobal Kay (eds.) (2009), Peasants and Globalization: Political Economy, Rural Transformation and the Agrarian Question, Routledge.
20. Scott, James C (2008), The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia, Yale University Press.
21. P K Joshi et al. (2004), "Agriculture Diversification in South Asia: Patterns, Determinants and Policy Implication", Economic & Political Weekly, June 12.
22. V S Vyas (1996), "Diversification of Agriculture: Concept, Rationale and Approaches", Indian Journal of Agricultural Economics, Vol. 51, No. 4.
23. Klaus Deininger & Hans Binswanger (2002), "The Evolution of the World Bank's Land Policy: Principles, Experience and Future Challenges", The World Bank Research Observer, Vol. 14, No.2.

24. Klaus Deininger (2003), Land Policies for Growth and Poverty Reduction, The World Bank, Washington D.C. [Available at www.worldbank.org].
26. Keith Griffin et al. (2002), "Poverty and Distribution of Land", Journal of Agrarian Change, Vol. 2, No.3. Articles published in Journal of Agrarian Change, Vol. 4, Nos. 1-2, 2004.
27. Keith Griffin et al. (2004), "In Defence of Neo-Classical Neo-Populism", Journal of Agrarian Change, Vol. 4, No.3.
28. Government of India, Economic Survey (Annual), New Delhi.
29. Akram-Lodhi, A. Haroon (1998). The agrarian question, past and present. *The Journal of Peasant Studies*, 25(4): 134-139.
30. Moyo, Sam, Praveen Jha and Paris Yeros (2013): "The Classical Agrarian Question: Myth, Reality and Relevance in the 21st Century," Agrarian South: Journal of Political Economy, Vol. 2, No. 1.pp 93-119.
31. Moyo, Sam, Praveen Jha and Paris Yeros (2015), The Agrarian Question in the 21st Century, Economic and Political Weekly, September 12, 2015 Vol. 50 no 37, pp.

BMEC4E07: ADVANCED ECONOMETRICS

Total Hours: 90 **Credit: 3**

Learning Objective

The course aims to provide students with thorough and sound understanding of the essential theoretical base of econometric modelling and broad applications of time-series and panel data econometrics. It also aims to assist students in getting comfortable with applied time series models and panel data models through statistical packages like Gretl to manage and analyze data.

Course Outcome

The students should be able to build econometric models to using the economic and business data with appropriate statistical tools and also should be able to interpret the econometric models with ease.

Module I Simultaneous Equation Models (25 hours)

The Nature of Simultaneous Equation Models- Problems of Simultaneous Equation Model-Bias of OLS Estimators (Inconsistency and Simultaneity bias.)

The Identification Problem- Rules of Identification- Order and Rank Conditions – Hausman Specification Test-

Methods of Estimating Simultaneous Equation System- Structural Reduced Form and Recursive Models - Single Equation Methods: Indirect Least Squares (ILS) – Instrumental Variable (IV), 2SLS; Complete System Method: 3SLS (concept only)

Module II Time Series Econometrics (30 hours)

Basic Concepts- Unit Root Stochastic Process- Random walk models-Trend Stationary and Difference Stationary Process- Tests of Stationary- DF and ADF tests-Spurious Regression Co integration: testing for co integration-EG and AEG tests-Error correction models-Economic Application

Approaches to Economic Forecasting- AR, MR and ARIMA Modelling of Time Series Data-The Box Jenkin's Methodology-Vector Autoregression (VAR) – Vector Error Correction model-Impulse response functions-Granger causality-Modelling volatility -ARCH – GARCH

Module III Dynamic Econometric Model (15 hours)

Autoregressive and Distributed Lag Models-Koyck Model, Partial Adjustment and Adaptive Expectations Model- Almon Approach to Distributed Lag Models

Module IV Panel Data Regression Models (20 hours)

Why Panel Data? - Estimation of Panel Data Regression Models Using OLS, Fixed Effect Approach and Random Effect Approach-Hausman Test

Module V-Data Lab (Self Study)

Using GRETL and working out the exercises with real data. (For internal evaluation only)

Prescribed Texts

1 Gujarati, Damodar (2003), Basic Econometrics, 4th edition, McGraw Hill, New York. (For Modules 1,2,3 and 4)
2 Gujarathi Damodar (2011),Econometrics by Example, Palgrave Macmillan
3 Sankar Kumar Bhaumik (2015), Principles of Econometrics A Modern Approach Using Eviews, Oxford University Press
4 Lee C. Adkins (2014) Using gretl for Principles of Econometrics (www.learneconometrics.com/gretl/using_gretl_for_POE4.pdf)

Essential Reading

1. Koutsoyiannis A (1977), Theory of Econometrics, Palgrave, New York.
2. Maddala G S (2002), Introduction to Econometrics, 3rd edition, John Wiley and Sons,New york
3. Ramanathan, Ramu(2002), Introductory Econometrics with Applications, Thomson Learning Inc, Singapore.
4. Intrilligator, M. D (1980)Econometric Methods, Techniques and Applications Prentice Hall , Engle wood Cliffs, N. J
5. Mukherijee, Chandan, Howard white and Marcwuyts (1998) Econometrics and Data Analysis forDeveloping Countries, Rutledge New York.
6. Wooldridge, Jeffrey M, Introductory Econometrics, (2002) Thompson, South Western, USA
7. Chris Brooks (2002) Introductory Econometrics for Finance, Cambridge University Press
8. Hamilton. J. (1994), Time Series Analysis, Princeton University, Princeton.
9. Johnston, J (1995) - Econometric Methods, 3rd edition, New York: McGraw Hill.
10. Pindyck, Robert S. and Daniel L. Rubinfeld (1995) – Econometric Models and Economic Forecasts, 4th Edition, Irwin McGraw-Hill, New York.

BMEC4E08: SECURITIES ANALYSIS AND PORTFOLIO MANAGEMENT

Total Hours: 90 **Credit: 3**

Learning Objectives

The study of Security Analysis and Portfolio Management assumes great significance in modern times. In a growing economy, financial markets are a major component and therefore best money management practices are essential. There are various theories on portfolio management and also there are some generally accepted methods of stock selection. The course includes major theories like Efficient Market Hypothesis, Markowitz's Model and it also tries to impart basic knowledge on fundamental and technical analysis. The specific objectives of the course are:

1. To make students aware about the risk- return trade-off in investment decisions.
2. To provide theoretical knowledge about stock market investment.
3. To stress the importance of maintaining a diversified portfolio.
4. To impart some practical knowledge on stock selection. After learning fundamental and technical analysis, students should be able to do security analysis.

Course Outcome

The students will get familiarized with the approaches to portfolio construction and asset pricing. They will have the theoretical and applied understanding of basic portfolio evaluation techniques.

Module I **(25 hours)**

Efficient Market Hypothesis – Weak, semi-strong and strong Forms of market efficiency-Tests- - Random walk theory, Risk and Return-Meaning and definition of risk-historical-expected-Types (Systematic and Unsystematic- Market Risk, Inflation risk-Business risk-Liquidity risk- Exchange risk- Interest Rate Risk-Political Risk-Climatic risk-Measurement of return (Return relative and CWI) and Risk (Standard deviation and Beta)

Module II **(25 hours)**

Portfolio Construction: Traditional Approach- Markowitz's Modern Portfolio Model-Portfolio return and risk - Diversification , Asset Pricing Models: Sharpe's Single-Index Model - Capital Asset Pricing Model –VJS Methodology- Capital Market Line-Security Market Line-Arbitrage Pricing Theory

Module III **(15 hours)**

Fundamental Analysis-Economy –Industry-Company Approach –Financial ratios-beta,price to book- Portfolio Performance measures: Sharpe Index - Treynor Index - Jensen's alpha -DCF method Present Value and Future value (Single Period-Annuity - Intra year compounding and discounting) –Doubling period- Dividend Discount Model-Single period-Multi Period- Gordons Constant Growth Model (Concepts only)-mutual funds-insert it

Module IV **(25 hours)**

Technical Analysis-Meaning and Assumptions-Tools: Trend Lines - Candlestick charts- bar charting – Major Chart Patterns - Dow Theory- Elliot Wave Principle, Volume indicators (OBV-Trin Statistics), Market Sentiment indicators (Short Interest Ratio-Breadth of the market)-Relative Strength Index - Points and Figure charting- Moving Averages of stock prices - Price Oscillator and crossovers

References

1. Donald E Fischer and Ronald J Jordan, Security Analysis and Portfolio Management
2. Edwin J Elton, Martin J Gruber, Stephen J Brown, William N Goetzmann, Modern Portfolio Theory and Investment Analysis,7th Edition
3. Robert A. Haugen , Modern Investment Theory
4. William F Sharpe , Investments
5. Prasanna Chandra, Financial Management: Theory and Practice
6. Francis J C, Investment Analysis
7. Jonathan Berk, Peter DeMarzo, Ashok Thampy, Financial Management
8. Charles P Jones, Investments: Principles and Concepts
9. By Doych securities-book on technical analysis

BMEC4E09: CAPITAL MARKET

Total Hours: 90 **Credit: 3**

Learning Objectives

It provides an overview of what a capital market is and students acquire a comprehensive knowledge of capital markets in market economy behaviour. Upon the successful coverage of the course, students will be able to understand the basics of savings and investment, to understand how capital markets work and what functions capital markets fulfil in market economy and to calculate the Risk, Return and Liquidity of various investment instruments.

Course Outcome

The student on completion of the course shall have an understanding of alternative Investment avenues and its risk-return evaluations. The will also develop a comprehension of the instruments and mechanism of capital Market specifically the stock exchanges in India. The will also have a naive practical grasp of compounding and discounting and analysis of financial statements.

Module I **(20 hours)**

Capital Market – Origin and Development – Functions – Capital Market Instruments – New Issue Market/IPO – Book Building – Listing – Trading processes – Internet Trading-Securities Market in India

Savings and Investment – The Investment Environment – Investment vs Speculation vs Gambling Investment Avenues – Individual Investors – Institutional Investors – Foreign Institutional Investors and role in India- Risks of Investment and Return on Investment - hedging

Module II **(30 hours)**

Fixed income and debt market [give t sufficiently elaborated]

–debt market- SEBI – Stock Exchanges – NSE – BSE -NSDL – CDSL – Mutual Funds - Credit Rating – CRISIL –ICRA,Fitch-Stock Market Indices – Derivative Markets -Forwards, Futures Options and Swaps- Exchange Traded Funds.

Module III **(20 hours)**

Simple Interest – The power of compounding – Time value of money – Net Present Values – Discounted cash flows [reorder it]

Module IV **(20hours)**

Financial statement analysis-Double entry book keeping– balance sheet of a company – profit and loss account – analysis – financial ratios– equity valuation.

Reference

1. Prasanna Chandra – Investment Analysis and Portfolio Management – Tata McGraw-Hill
2. Fisher and Jordan – Security Analysis and Portfolio Management – Prentice - Hall
3. Bhole L M – Financial Institutions and Markets - Tata McGraw-Hill
4. Barua, Regunathan and Varma – Portfolio Management - Tata McGraw-Hill
5. Prasanna Chandra – Financial Management, Theory and Practice - Tata McGraw-Hill
6. Avadhani V A – Securities Markets – Himalaya Publishing House
7. Gupta L C – Rates of Return – Oxford University Press
8. Khan M Y – Indian Financial System - Tata McGraw-Hill
9. Yasaswy N J – Equity Investment - Tata McGraw-Hill
10. William J Baumol – Stock Market and Economic Efficiency
11. Thomas, Susan (Ed.) Derivatives Markets in India - Tata McGraw-Hill
12. RBI Bulletin, CMIE Reports, Prime Data Base, sebi.com, nseindia.com, bseindia.com
13. SEBI Annual Report