

AC

Item No.

University of Mumbai

University of Mumbai



Revised Syllabus

Sem. I, II, III & IV

Program: M. A.

Course: Economics

(As per the Credit Based Semester and Grading System with

effect from the academic year 2021-2022)

S.P. Vichar



PREAMBLE:

The syllabus of MA has been revised by keeping in view of the recent trends in the subject of economics and by giving due weightage to the case study approach in syllabus. The Board of Studies in Economics has revised the syllabi of papers at the MA which will be made effective from the Academic Year 2021-22. In this revision, some of the existing optional papers have been replaced by new papers. A broad overview of the structure and other details of the course is given below.

DURATION:

The course shall be a full time course.

The duration of M.A. course shall be of Two years across Four Semesters.

MA Part I: SEMESTER – I & II (Four papers each semester)

MA Part II: SEMESTER – III (Five papers)

MA Part II: SEMESTER – IV (Three papers)

Dissertation

TOTAL CREDITS

A student enrolled for MA Program should acquire a total of 100 credits over four semesters.

CORE PAPERS

All papers taught in Semester I and II are core courses and are compulsory for all students admitted do the MA Program. A module of six credit course is taught for a period of 15 hours. So the total teaching hours needed to complete one paper is 56 hours. The core courses in toto are of 48 credits which includes papers of Semester I and Semester II.

The core papers of Semester I are : Microeconomics – I (6 credits), Macroeconomics – I (six credits), Agricultural economics (6 credits) and Economics of Labour Market. (6 credits). The core courses of Semester–II are : Microeconomics -II (6 credits), Macroeconomics-II (6 credits),

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Agricultural Development and Policy (6 credits) and Industrial Relations in India (6 credits). The remaining 42 credits can be acquired by a student of MA programme, by opting choices from the list of electives given or they can acquire the same in combination with other subjects, from the courses offered by other Departments.

ELECTIVES

Out of 100 credits, 42 credits will have to be scored among the optional papers. Umpteen choices are provided for the optional courses to be chosen from Semesters Three and Four. Each optional are of 6 credits each.

The list of elective include papers which enhances skills as well as the interdisciplinary courses along with others.

THE DISSERTATION COMPONENT

The topics of Dissertation will be totally oriented towards the Case Study Approach. The Dissertation component will be for a total of 100 Marks and 10 credits. The pattern of evaluation is based on the UGC guidelines and that of University of Mumbai. The Board of Studies of Economics will conduct workshop to throw light on potential areas of case studies of dissertation from time to time.

CASE STUDY APPROACH

As per the latest guidelines issued by UGC in 2021, the Board of Studies of Economics resolved that the themes of Dissertation will be based on Case Study Approach. Even for the Core Papers and electives, the relevant modules are focused on Case Study approach. From within the core as well as electives too, student will get the opportunity to get familiarized with case studies related to the relevant field.

ALLOTMENT OF LECTURES:

The allotment of lectures is as per the common guidelines stipulated by the Academic Council for Humanities of University of Mumbai.



PATTERN OF EXAMINATION

For all courses, there is an internal exam for 40 marks and of 60 marks exam. The pattern of exam is as per the common guidelines stipulated by the Academic Council for Humanities of University of Mumbai.

DURATION:

- Two Hours for each 60 marks paper.

PATTERN OF EVALUATION

The performance of the learners shall be evaluated into two parts. For all courses, there is an internal exam for 40 marks and of 60 marks.

(I) Internal Assessment: 40 Marks:

Sr. No	Evaluation method	Marks
01	One Assignment / project based on Case study	20
02	One Periodical class Test	10
03	Active participation in routine class instructional deliveries (case studies / seminars / presentation)	05
04	Overall conduct as a responsible student, mannerism & articulation and leadership qualities in organizing related academic actives.	05
	Total Marks	40

(II) Theory Examination: 60 Marks :

PAPER PATTERN:

There shall be four questions each of 10 marks, for 60 marks paper. There will be three questions with internal choices (a or b) ie , with an internal option to choose any one Question.



Fifth question consists of 20 marks, consisting of four descriptive sub-questions or objective questions.

All questions shall be compulsory with internal choice within the questions.

The questions should be framed in such a way that every module contains two questions, with internal choices. For eg: for Question no.1 choices may be a or b, whereas students can answer any one from a or b.

Questions	Modules	Marks
Qn.1	Unit I a or b	10
Qn.2	Unit II a or b	10
Qn.3	Unit III a or b	10
Qn.4	Unit IV	10
Qn.5	4 Sub-questions from Unit I, II, III & IV OR 20 MCQs from Unit I, II, III & IV	20
	Total	60

MULTIPLE CHOICE QUESTIONS

By taking into consideration of the Multiple Choice Exams which students have to answer in varied competitive exams like Central and State Civil Services as well as Qualifying exams for Assistant Professors , it is resolved by members of BOS and approved by the Academic Council to keep five objective type questions each from the respective modules.

DURATION OF EXAMINATION

Two Hours and one and a half hours respectively are allotted for 60 and 40 marks papers respectively.



COURSE STRUCTURE
(APPLICABLE FROM ACADEMIC YEAR: 2021-22)

MA (SEMESTER-I)

COURSE CODE	REVISED PAPER		CREDIT	MARKS
CORE PAPERS				
ECOME101	I	MICROECONOMICS – I	6	100
ECOME102	II	MACROECONOMICS – I	6	100
ECOAE103	III	AGRICULTURAL ECONOMICS	6	100
ECOELM104	IV	ECONOMICS OF LABOUR MARKET	6	100

MA ECONOMICS (SEMESTER-I)

COURSE CODE	CORE PAPER: PAPER NO –I	CREDIT	MARKS
ECOME101	MICROECONOMICS – I	6	100

Course Objectives

The objective of this paper is to develop an understanding of the basic microeconomic theory that has applications in other areas of Economics. At the end of this course students are expected to be familiar with basic microeconomic theory and acquire analytical skills to analyse problems of economic policy. Examples and exercises would be for strengthening the understanding.

Course Outcomes

- Develop a nuanced understanding of consumer and firm behaviour along with general equilibrium theory.
- Provide students with the necessary theoretical and analytical tools to study problems of economic policy.



Module 1: Consumer Behavior

(15 Lectures)

Preference ordering, The feasible set, Consumption decision, Comparative statics: price and income effects, Slutsky equation, Measuring the benefits of price change, Utility maximization problem, Indirect utility function, Expenditure function.

Module 2: Production, Cost and Supply

(15 Lectures)

Production function: properties and types, Cobb-Douglas, CES and Translog, Elasticity of substitution, Variations in scale, Variations in input proportions, Cost: Cost minimization: long run and short run, Cost function, Relation between long run and short run costs, Supply: Profit maximization and firm supply, Long run supply function, Profit function, Relationship between long and short run profit maximization.

Module 3: Theory of Competitive Markets

(15 Lectures)

Market demand and market supply curve, Short run market equilibrium, Stability of equilibrium: Walrasian and Marshallian approaches, Long run market equilibrium, Stability of long run equilibrium.

Module 4: General Equilibrium and Welfare Economics

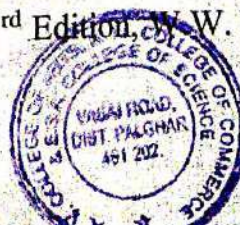
(15 Lectures)

Walrasian general equilibrium of a competitive economy, Edgeworth exchange theory, Pareto criterion, First and Second theorems of welfare economics, Externalities and market failure.

References:

1. Das, S.P. (2007): Microeconomics for Business, Sage, New Delhi.
2. Gravelle H. and Rees R. (2004): Microeconomics, 3rd Edition, Pearson Education Ltd, New Delhi.
3. Jehle, G.A. and P.J. Reny (2006): Advanced Microeconomic Theory, 2nd Edition, Pearson Education, New Delhi.
4. Tandon, P. (2015): A Textbook of Microeconomic Theory, Sage, New Delhi.
5. Varian H. (2000): Intermediate Microeconomics: A Modern Approach, 8th Edition, And W.W. Norton and Company.
6. Varian, H.B. (1992): Microeconomic Analysis, 3rd Edition, W.W. Norton and Company.

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MA ECONOMICS (SEMESTER-I)

COURSE CODE	CORE PAPER: PAPER NO -II	CREDIT	MARKS
ECOME102	MACROECONOMICS - I	6	100

Course Objectives

This paper is designed to provide in-depth knowledge on varied concepts of Macroeconomics. The contents of the paper throws light on a range of issues like national income, social accounting, consumption expenditure, investment analysis, inflation, trade cycle as well as money supply and demand for money.

Course Outcomes

- The learners can enhance their understanding on the concepts like national income and social accounting, consumption expenditure and investment analysis.
- Students acquire knowledge on issues like inflation, trade cycle as well as money supply and demand for money.

Module 1: National Income and Social Accounting

(15 Lectures)

National Income Accounting Concepts, Accounting identities, Inflation and price indices. Social accounting-Concepts, Features and types of social accounts, National income and Product accounts, Input-output accounting, Flow of funds accounts.

Module 2: Consumption Expenditure and Investment Analysis

(15 Lectures)

Absolute income hypothesis; Relative income hypothesis; Permanent income hypothesis; Life-cycle hypothesis. Investment- Types of Investment- Determinants of Investment -Marginal efficiency of capital (MEC)-Supply price of capital (SP), Prospective yield of capital (PY)- FRB-MIT (Federal Reserve Bank and Massachusetts Institute of Technology).



Module 3: Inflation and Trade Cycles

(15 Lectures)

Theories of Inflation: Demand pull and Cost push, Keynesian Theory, Inflation and GDP, Trade cycles, Anti cyclical policy, Theories of Trade Cycles - Hicks, Schumpeter, Goodwin and Samuelson.

Module 4: Supply and Demand for Money

(15 Lectures)

Components of money supply; Measures of money supply: M1, M2, M3 and M4-Determinants of Money Supply- Classical approach, Cambridge approach, Keynesian approach, Liquidity preference theory, Portfolio balance Approach: Baumol and Tobin, Milton Friedman's Approach.

References:

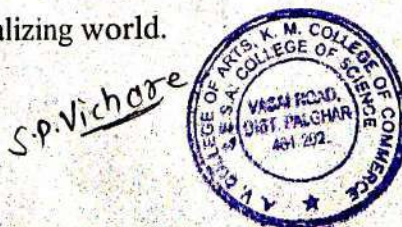
1. Dornbusch, Fischer, Stratz, Macroeconomics, (Revised Edition). Tata McGraw-Hill. New Delhi
2. Ahuja H. L. Macroeconomics Theory and Policy, S. Chand and Co. Ltd New Delhi.
3. Froyen R. T. Macroeconomics (7th Edition). Pearson Education. New Delhi
4. Mankiw, N. G. Macroeconomics, (Revised Edition), Worth Publications. New York.
5. Carlin, W and S David, Macroeconomics, Oxford University Press.
6. Errol D'Souza Macroeconomics, Pearson Education India-2009.

MA ECONOMICS (SEMESTER-I)

COURSE CODE	CORE PAPER: PAPER NO -III	CREDIT	MARKS
ECOAE103	AGRICULTURAL ECONOMICS	6	100

Course Objectives

This course aims to enhance the students understanding of agricultural development. Starting from basic questions like what factors lead to agricultural development or why does the share of agriculture in GDP go down once economies start developing, the course tries to enhance the students' awareness on contemporary debates in the literature, and leads them to analysis of current governmental policies and strategies for surviving in the globalizing world.



Course Outcomes

- This papers enhances Knowledge on the process of development of agriculture in an emerging economy.
- It throws light on the role and the policies as well as the competitiveness of the agricultural sector.

Module 1: Introduction: Nature and Scope of Agriculture (15 Lectures)

Nature and Scope of Agriculture Economics - Role of Agriculture in Economic Development - Crop Pattern in India –Agricultural Productivity: Meaning, Risk and Uncertainty in Agriculture- Causes for Low Agricultural Productivity -Remedial Measures.

Module 2: Changing Perspective in Agriculture (15 Lectures)

Changing Perspective in Indian Agriculture- *Management of Integrated Farming*
- Organic Farming- Contract Farming- Argo Process Industries :Scope, Problems and Measures -
Water Management: Efficiency and Irrigation Tools- Water Sources for Irrigation and Challenges.

Module 3: Agriculture Extension and Developments (15 Lectures)

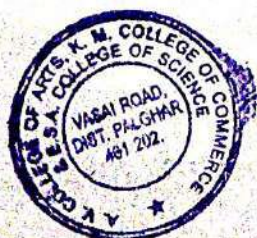
Mission on Agricultural Extension (SMAE)- Support to State Extension Programmes for Extension Reforms Scheme (ATMA Scheme)- Use of ICT, Mass Media Support to Agricultural Extension- Natural Resource Management - Agricultural Innovations and Mechanization- New Methods of Cultivation - Agro Tourism and Policy Measures.

Module 4: Agriculture Trade Policy, Promotion and Logistics Development (15 Lectures)

India's Agriculture foreign Trade - Foreign Direct Investment (FDI) Policy in the Agriculture Sector- Export Promotion Forum (EPF) - Food & Agriculture Organization (FAO) - International Fund for Agricultural Development (IFAD) - Agriculture infrastructural development program and its evaluation-Agri-logistics in India: Challenges and Emerging Solutions

References:

1. B. D. Dhawan, Indian Water Resource Development for Irrigation: Issues, Critics, Reviews.
2. Ashok K. Mitra, Irrigation Reforms EPW Vol. XXXII No. 13, March 29, 1997.
3. Mellor John W., The Economics of Agricultural Development, Cornell University Press, New York.
4. M. L. Dantwala et al, Indian Agricultural Development Since Independence: A Collection of Essays, Oxford and IBH Publishing Company, New Delhi.
5. S. Narayan, Organic Farming in India: Relevance, Problems and Constraints, NABARD Occasional Paper 38.
6. Annual Report 2020-21, Department of Agriculture, Cooperation & Farmers' Welfare Ministry of Agriculture & Farmers' Welfare Government of India Krishi Bhawan, New Delhi-110 001.



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MA ECONOMICS (SEMESTER-I)

COURSE CODE	CORE PAPER: PAPER NO -IV	CREDIT	MARKS
ECOELMI04	ECONOMICS OF LABOUR MARKET	6	100

Course Objectives

The objective of this course is to introduce the student to labour economics with an emphasis on microeconomic theory and empirics. Through the course, the student will learn basic economic forces behind employment and wages, sources of labour market imperfections, driving forces for education and skill upgradation, discrimination among the workers and public policies for labour welfare.

Course Outcomes

- The analysis of case studies would help the student to understand real world issues pertaining to labour markets and also to assess related public policy measures.
- The course sheds light on a range of new developments and a host of issues studied by generations of labour market experts thereby students are equipped with the skill of getting assimilated with the labour markets in real life as well.

Module 1: Nature of the Labour Market (15 Lectures)

Concept of labour market, Characteristics, Types, Basic Search Theory in labour markets.

Module 2: Micro and Macro Approaches in Labour Markets (15 Lectures)

The theory of labour demand, Industry demand for labour, Determinants of labour demand, The theory of supply, Work-leisure choice in Indifference curves, Budget constraint Utility maximization, backward-bending supply curve and its applications.

Module 3: Wage Issues in Labour Markets (15 Lectures)

Theories of Wages, Wage structure and components of wages, Share of wages, Inequality of Wage income, Male-Female Wage differentials, Contract labour, Properties of contractual wages, Minimum wages, Wage and output relations in India during pre- and post-reform period, Wage code 2020.

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(15 Lectures)

Module 4: Case Studies on Labour Market in India

Role of risk, Wage differentials, Employee Turnover, Migrant Labour, Impact of Trade Unions on Productivity and Wages, Social Security, Occupational Safety and Security, Sectoral Labour Market, Formal and informal

References:

1. Bhagoliwal TN, Economics of Labour and Industrial Relations, Sahitya Bhavan, Agra, 1996.
2. Cahuc Pierre and Andre Zylberberg, Labor Economics, Massachusetts Institute of Technology, 2004
3. Harris Barbara and Sinha White, Trade Liberalisation and India's Informal Economy, Oxford University Press, New Delhi, 2007.
4. Sapsford David and Zafiris Tzannatos, The Economics of the Labour Market, Macmillan, London, 1993.
5. Singh Jwitesh Kumar, Labour Economics, Deep and Deep Publishers, Delhi, 1998.
6. Uchikawa Shuji (eds.) Labour Market and Institution in India 1990s and Beyond, Manohar Publishers, New Delhi, 2003.

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MA (SEMESTER-II)

COURSE CODE	REVISED PAPER		CREDIT	MARKS
'CORE PAPERS				
ECOME201	V	MICROECONOMICS – II	6	100
ECOME202	VI	MACROECONOMICS – II	6	100
ECOADP203	VII	AGRICULTURAL DEVELOPMENT AND POLICY	6	100
ECOTUIR204	VIII	INDUSTRIAL RELATIONS IN INDIA	6	100

MA ECONOMICS (SEMESTER-II)

COURSE CODE	CORE PAPER: PAPER NO -V	CREDIT	MARKS
ECOME201	MICROECONOMICS – II	6	100

Course Objectives

The objective of this course is to acquaint students with different approaches to analysing strategic behavior of individuals under asymmetric and incomplete information. Case studies and applications would be used to expound strategic behavior.

Course Outcomes

- Create an understanding of strategic behavior under oligopoly
- Provide students with the necessary theoretical and conceptual underpinnings to real world concepts and issues using illustrations and case studies.

Module 1: Introduction to Game Theory (15 Lectures)

Introduction to Game Theory, Normal Form and Extensive Form of a game, Dominant Strategy Equilibrium, Nash Equilibrium in Pure and Mixed strategies, Prisoner's Dilemma, Dynamic Games, Subgame Perfection

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(15 Lectures)

Module 2: Oligopoly

Oligopoly and its features, The Cournot model, The Bertrand Model, The Stackelberg model, Oligopoly in repeated games and tacit collusion, Comparison with monopoly, Limit pricing and Entry deterrence in monopoly.

(15 Lectures)

Module 3: Economics of Information

Principal-Agent models, Moral Hazard and Adverse Selection, The market for lemons, optimal contracts under asymmetric information, Signaling and Screening.

Module 4: Case Studies and Applications

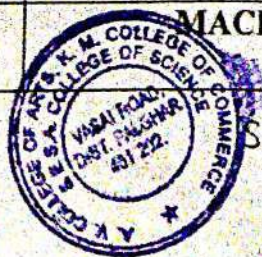
Case studies and Applications: Price competition for homogenous and differentiated products, Quantity/Production capacity competition, Leadership and Cartels, Insurance and Debt contracts, Advertising and Brand reputation.

References:

1. Das, Satya P. (2007): Microeconomics for Business, Sage Publications India Pvt Ltd., New Delhi.
2. Gibbons R.A. (1992): A Primer in Game Theory, Harvester-Wheatsheaf.
3. Gravelle, H. and Rees, R. (2004): Microeconomics, 3rd Edition, Pearson Edition Limited, New Delhi.
4. Jehle, G.A. and P.J. Reny (2006): Advanced Microeconomic Theory, 2nd Edition, Pearson Education, New Delhi.
5. Png, Ivan (2012): Managerial Economics, 4th Edition, Routledge, New York.
6. Varian H. (2000): Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W. Norton and Company.

MA ECONOMICS (SEMESTER-II)

COURSE CODE	CORE PAPER: PAPER NO -VI	CREDIT	MARKS
ECOME202	MACROECONOMICS – II	6	100



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Course Objectives

This paper provides deep understanding on macroeconomic concepts. The paper highlights pricing mechanism under imperfect market structures, rigidities and real business cycle theory. Considering the latest developments in the literature of macroeconomics, Keynesian Macroeconomics is introduced so that students can understand the rules, discretion and inconsistencies in policy decisions as well as traditional and non conventional policy making.

Course Outcomes

- To acquaint students with latest developments in macroeconomics To teach students about real business cycles.
- To enhance the understanding of students regarding the practical approach of policy making. To establish link between macroeconomic theories and international Open Economy

Module 1: Prices under imperfect competition

(15 Lectures)

Imperfectly Flexible Prices, Price-setting under imperfect competition. Menu costs, real rigidity and neutrality, Quadratic price adjustments.

Module 2: Theories of Business Cycles

(15 Lectures)

Real Business-Cycle Theory, Introduction: Some Facts about Economic Fluctuations, An Overview of Business-Cycle Research, A Baseline Real-Business-Cycle Model Household Behavior, Empirical Application: Money and Output, Assessing the Baseline Real-Business-Cycle Model Problems.

Module 3: New Keynesian Economics

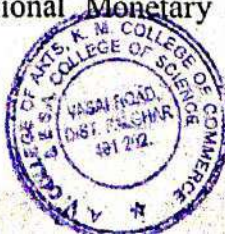
(15 Lectures)

New Keynesian Economics, Disequilibrium, multiple equilibria, Hysteresis Reconstructing the Keynesian multiplier, The New Keynesian model of inflation.

Module 4: Macroeconomics Policy Issues (15 Lectures)

Macroeconomic Policy, Rules versus Discretion, Credibility & Reputation, Dynamic Inconsistency Banks, Financial Intermediaries and Unconventional Monetary Policy Inflation Targeting and Exchange Rates.

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References:

1. Dornbusch, Fischer and Startz, 2012, Macroeconomics, 10th Editions, McGraw Hill Education Pvt. Ltd. New Delhi.
2. Heijdra, Ben J. and Frederick Van Der Ploeg. 2002, Foundations of Modern Macroeconomics, Oxford University Press, Oxford.
3. Romer, David, 2012, Advanced Macroeconomics, McGraw-Hill. Fourth Edition.
4. Wickens, Michael, 2011, Macroeconomic Theory and the Dynamic General Equilibrium Approach. Princeton University Press.
5. Wendy Carlin & David Soskice, 2006, Macroeconomics- Imperfections, Institutions & Policies- Oxford University Press (2006).
6. Olivier Blanchard – Macroeconomics, Pearson, Seventh Edition (2017)

MA ECONOMICS (SEMESTER-II)

COURSE CODE	CORE PAPER: PAPER NO -VII	CREDIT	MARKS
ECOADP203	AGRICULTURAL DEVELOPMENT AND POLICY	6	100

Course Objectives

This course aims to enhance the students understanding of agricultural development. Starting from basic questions like what factors lead to agricultural development or why does the share of agriculture in GDP go down once economies start developing, the course tries to enhance the students' awareness on contemporary debates in the economic parlance, and leads them to analysis of current governmental policies and strategies for surviving in the globalizing world.

Course Outcomes

- Aims to improve awareness on agricultural development.
- Promotes students awareness on contemporary debates in the area of agricultural products and market.



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Module 1: Global Theories of Agricultural Development (15 Lectures)

Role of Agriculture in A Developing Economy Vis-À-Vis a Developed Economy; Theories of Agricultural Development (Lewis, Schultz, Hayami and Ruttan and Cobb-Douglas)

Module 2: Sustainable Agricultural Development and Diversification of Agriculture in India (15 Lectures)

Impact Of Green Revolution; Models of Spread of Technology and Experiences in Input Use Efficiency; Measurement and Strategies for Sustainable Development. National Mission for Sustainable Agriculture (NMSA) & Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), Dr. M. S. Swaminathan Committee Report, Bio- Technology Use Applications in Agriculture.

Module 3: Competitiveness of Agriculture Products and Marketing (15 Lectures)

Nature And Types of Agriculture Produce, Concept and Types of Agricultural Markets, Supply Chain and Its Management in Agriculture, Marketable and Marketed Surplus, Causes of Low Marketable Surplus in India. Problems Of Agriculture Marketing in India. Model APMC Act 2003, National Agriculture Market (eNAM), Impact of Government Intervention in the Markets.

Module 4: History and Policies for Agricultural Development in India (15 Lectures)

Trends In Agricultural Production Since 1950; Agriculture Policy; Area, Productivity, Employment and Wage Rate Analysis; Agricultural Policies and It's Evaluation; New Agricultural Policy 2000, National Policy for Farmers 2007, National Food Policy. New Agricultural Bills 2020; Objectives of Agricultural Price Policy- Role of MSP And Its Critical Evaluation- Trends in India's Agricultural Exports and Imports and Implications. WTO And Indian Agriculture.

References:

1. Basu Kaushik, Analytical Development Economics, Oxford University Press, 1998.
2. Bhalla G S., Globalization and Indian Agriculture, Volume 19 of the State of the Indian Farmer Series. Academic Foundation, 2004.
3. Dreze Jean and Amartya Sen, Hunger and Public Action, Oxford University Press, 1989
4. Lewis Arthur, Economic Development with Unlimited supply of labour, Manchester School of Economics and Social Studies 22: 139-91, 1954.
5. Mellor J and Mudahar M, in Agriculture in Economic Development: Theories, findings and Challenges in Asian context in A Survey of Agricultural Economics Literature, Edited by Lee Martin. University of Minnesota Press, 1992.
6. Norton George and Jeffery Alwang, Introduction to Economics of Agricultural Development, McGraw Hills, New York, 1993.
7. Annual Reports, Department of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare Government of India Krishi Bhawan, New Delhi, 2000

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MA ECONOMICS (SEMESTER-II)

COURSE CODE	CORE PAPER: PAPER NO -VIII	CREDIT	MARKS
ECOTUIR204	INDUSTRIAL RELATIONS IN INDIA	6	100

Course Objectives

This course aims to provide a basic conceptual understanding of the economics of trade unions and industrial relations in India. Empirical relevance of theories with suitable examples from a practical industrial relations viewpoint will strengthen a student's understanding of the topic along with their limitations.

Course Outcomes

- Upon completion of this course, students will be able to identify the operational functioning of trade unions and its impact on industrial relations with specific reference to the Indian subcontinent.

Module 1: Industrial Relations

(15 Lectures)

Approaches to Industrial Relations: Macro Approaches-System Approach and Class Conflict Approach, Micro Approaches-Taylorism, Fordism and Post-Fordism, Neo-Fordism, Pluralism.

Module 2: Political Economy of Trade Unions

(15 Lectures)

Evolution and Role of Trade Unions. Approaches to the Origin of Trade Unions. Bargaining Theory of Wages, Impact of unions on productivity and wages, Employment Security and Efficiency.

Module 3: Industrial Relations in India

(15 Lectures)

History, growth and structure of trade unions, Independent and white collar unions in India, Trade Unions and Contract Workers. Employer's Organisations: Role of managerial class in industrial relations. Industrial conflict: Forms of conflict, strikes, lockouts, absenteeism, employee turnover, causes and consequences and trends in industrial disputes, Industrial Relation in Gig economy



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Impact of Globalisation, Tripartism, Labour Legislation affecting industrial relations: Statutory and Non-Statutory measures to settle industrial disputes, Workers Participation in Management, Voluntary Retirement Scheme and other retrenchment measures.

References:

1. Amin, Ash (Ed.), Post-Fordism-A Reader, Blackwell, Oxford, 1994.
2. Government of India, Ministry of Human Resource Development, Report of Second National Commission on Labour, 2002.
3. Hicks J.R., The Theory of Wages, Clarendon Press, Oxford, 1932.
4. Monappa, Arun, Industrial Relations, Tata McGraw Hill, New Delhi, 2005.
5. Pencavel, John, Labour Markets under Trade Unionism: Employment, Wages and Hours, Basil Blackwell, Cambridge, Massachusetts, 1991
6. Roy, J. Adams (eds.), Comparative Industrial Relations, Harper Collins Academic, London, 1991.

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MA (SEMESTER-III)

COURSE CODE	REVISED PAPER		CREDIT	MARKS
ELECTIVE PAPERS (ANY FIVE)				
ECOIE301	IX	ECONOMETRICS	6	100
ECOIE302	X	INDUSTRIAL ECONOMICS	6	100
ECOPFPC303	XI	PUBLIC FINANCE AND PUBLIC CHOICE	6	100
ECOITTP304	XII	INTERNATIONAL TRADE: THEORY AND POLICY	6	100
ECOEHD305	XIII	ECONOMICS OF HUMAN DEVELOPMENT	6	100
ECOIE306	XIV	INDIAN ECONOMY	6	100
ECOED307	XV	ECONOMICS OF DEVELOPMENT	6	100
ECOFE308	XVI	FINANCIAL ECONOMICS	6	100

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO -IX	CREDIT	MARKS
ECOIE301	ECONOMETRICS	6	100

Course Objective

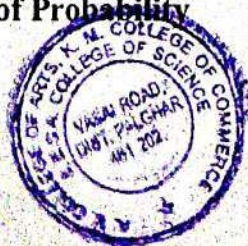
This paper is designed with the objective of acquainting the students with the advanced research techniques.

Course Outcomes

- The students will be able to draw inferences and solve research problems using advanced econometric techniques.

Module 1: Theory of Probability

(Lectures



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15)

Basic concepts and definitions of probability, Laws of addition and multiplication, Conditional probability, Bay's theorem (statement), Binomial, Poisson and Normal Distribution, the Law of Large Numbers (without proof).

Module 2: Index Numbers
15)

(Lectures

Problems and methods of construction of various types of indices, Laspeyres, Pasche's and Fisher's ideal index numbers, Tests for adequacy of index numbers: Time reversal, factor reversal and circular tests, chain base indices, base shifting splicing and deflating the index nos., costs of living index numbers and consumer price index numbers. New CPI of India, Estimation of CPI food, Fuel etc using the method of exclusion.

Module 3: Classical Linear Regression Model
15)

(Lectures

The classical linear regression model: Simple Linear Regressions and Multiple linear Regressions, Properties of estimators, Estimation and hypothesis testing, Interpreting regression coefficients, R^2 and adjusted R^2 , F and t values in regression, Assumption and violation of the assumptions of Classical Linear Regressions Models, Interval estimation and hypothesis testing, Problem of autocorrelation, Heteroskedasticity, Multicollinearity.

Module 4: Time Series Analysis (Lectures 15)

Testing for unit root, Cointegration and Error Correction Models, Granger causality, ARDL models, ARIMA Model, ARCH and GARCH Models.

References:

1. Chiang A. C.: Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill, 1984.

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2. Dowling Edward T: Introduction to Mathematical Economics, Schaum Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
3. Green W H, Econometric Analysis, eighth edition.
4. Gujarati D: Econometrics: by Examples, Palgrave Macmillan, 2011
5. Gupta S.C. Fundamentals of Statistics S. Chand & Sons New Delhi (1993)
6. Kennedy P.: A Guide to Econometrics, sixth edition, Wiley Blackwell edition, 2008

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO -X	CREDIT	MARKS
ECOIE302	INDUSTRIAL ECONOMICS	6	100

Course Objectives

This paper will make aware learners about the factors helping industry, other areas supports it, market structure, also to focus on financial institutions, policies and theories of location. It also focuses on aspects related to industrial growth.

Course Outcomes

- Enable to empower students about the historical background of industrial development and financial institutions.
- It provides understanding on market structure and best theories to fix the location of industries.

Module 1: Introduction to industrial Economics 15)

(Lectures

Introduction, History of the field, Factors inhibiting Industrialization, Industrial Development



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under Plans in India, The organizational forms and alternative Motives of the Firm, Current Problems of public sector industries in India.

Module 2: Market Structure
15)

(Lectures

Standard forms of Market, Monopolistic Competition, Contestable Market, Product Differentiation, Economies of scale and scope, Market Structure and Profitability, Market Structure and Innovation, Measures: Organizational level and political level.

Module 3: Industrial Finance
15)

(Lectures

Sources of Finance: Internal and External, Role, Nature, Volume and Types of Institutional Finance: IFCI, IDBI, IRCI, SFC, SIDC, And SIDBI, Commercial Banks Secured and Unsecured Loans.

Module 4: Industrial Growth in India and Industrial Location (Lectures 15)

Industrial Policies of 1948, 1977 and 1999, Trends in industrial growth after 1991, Factors affecting industrial Location, Theories of industrial Location: Weber and Sargent Florence, Industrial imbalance: Causes and Measures, Need for Balanced Regional Development in India.

References:

1. Ahluwalia I. J.-Industrial Growth In India – Stagnation Since the Mid Sixties- Oxford University Press, Delhi, 1985.
2. Hay J. and Morris D. J. – Industrial Economics – Theory and Evidence, Oxford University Press (Latest Edition)
3. Martin Stephen, Industrial Economics – Economic Analysis and Public Policy, Macmillan Publishing Company, New York, (Latest Edition)
4. Mookharji Dilip (Eds), Indian Industry – Policies and Performance, Oxford University

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Press, Delhi, 1998.

5. Pandey I. M. –Financial Management, Vikas Pub. House Pvt. Ltd., New Delhi, 2000.
6. Mohanty Binod (eds.) –Economic Development Perspectives, Vol. 3, Public Enterprises and Performance – Common Wealth Publication New Delhi, 1998.

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO –XI	CREDIT	MARKS
ECOPFPC303	PUBLIC FINANCE AND PUBLIC CHOICE	6	100

Course Objectives

The objective of this paper is to provide advanced theoretical knowledge of theory of Public Finance and public choice. In addition, the learners would find it interesting to analyze Indian government budgets and Indian fiscal federalism.

Course Outcomes

- Provides in-depth knowledge on range of issues related to public finance and public choice. This enables the students to analysed the budgets of government of India

Module 1: Evolution of Public Finance and Public Choice Theory (Lectures 15)

The concept of private and public wants, provision of private and public goods, merit wants and merit goods, Macroeconomic aspects and nature of public finance in developing economies, Public choice theory, its Role in development.

Module 2: Principles of Taxation and Expenditure (Lectures 15)



Principles of Taxation, Taxable capacity, Colin Clark and Musgrave's view, taxable capacity v/s optimum budget, Rise in public expenditure, demand and supply side hypotheses, Pure theory of public expenditure, Ability to pay theory, benefit principle, Voluntary exchange theory, Samuelson's pure theory, cost benefit analysis.

Module 3: Government budgeting (With special reference to India).

(Lectures

15)

Concept of budget, purposes and budgetary theory, classification of budgets, Functional, organizational, economic and object, Zero base budgeting, Impact of budgetary changes, increase in government expenditure (deficit spending), increase in taxation (surplus without spending), balanced budget (spending without deficit), Previous two years budget analysis.

Module 4: Fiscal Federalism.

(Lectures

15)

The concept of fiscal federalism, division of power and functions, division of resources, working of Indian fiscal federalism, finance commissions of India and resource transfer, previous two finance commissions in India.

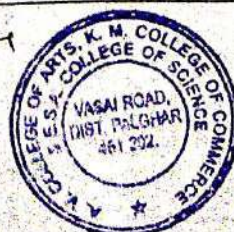
References:

1. James Buchanan, The Economics of Public Finance, 1964.
2. R.A. Musgrave, Public Finance in a Democratic Society, 1986.
3. Raja Chelliah, Fiscal Policy in Underdeveloped Countries, 1976
4. Wayland D. Gardner, Government Finance: National, State, Local, 1978
5. Indian Finance Commission Reports.
6. Bimal Jalan, Indian Economy: Problems and Prospects, 1992

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO -XII	CREDIT	MARKS
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ECOITTP304	INTERNATIONAL TRADE: THEORY AND POLICY	6	100
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Course Objectives

This paper aims at providing a theoretical exposition of bases, effect and restrictions on free flow of International Trade with empirical evidence. It also updates learner's knowledge about regional trading arrangement and multilateralism in the context of WTO.

Course Outcomes

- Enables to understand the flow of international trade
- Awareness on varied trade policies

Module 1: Classical and Neoclassical Theories of Trade. 15)

(Lectures

Brief review of absolute and comparative advantage of trade, real and opportunity cost approaches, terms of trade, reciprocal demand and offer curves, The Heckscher – Ohlin (H-O) Theory, Factor Price Equalization Theorem, Leontief's paradox, Rybczynski Theorem, Product cycle theory and technological gap theory.

Module 2: Modern Trade Theory. 15)

(Lectures

Concept of intra industry trade, imperfect competition and trade: the Neo Heckscher – Ohlin models, Favley model, Neo Chamberlinians model, Krugman model, Oligopolistic models– Brander– Krugman model, reciprocal dumping model, Iceberg model, Gravity equation.

Module 3: Trade Policy. 15)

(Lectures

Instruments of trade policy: Tariffs and welfare, optimum tariff, tariff and real rewards to



factors of production, the Stolper–Samuelson Theorem, Metzler's paradox, theory of Customs union, quotas and export subsidies, gains from trade, Trade and growth.

Module 4: Contemporary Regional Trading and WTO.
15)

(Lectures

Regionalism and Multilateralism in the context of WTO, Critical Evaluation of the Role played by WTO, Overview of regional trading arrangement: SAARC, SAFTA, ASEAN, European Union, NAFTA.

References:

1. Grimwade Nigel, International Trade (Second Ed), Routledge, London 2001
2. Grubel H.G. and P.J. Lloyd, Intra-Industry Trade, Macmillan, London, 1975
3. Haberler G. A Survey of International Trade Theory, International Finance Section, Department of economics, Princeton University, 1961
4. Krugman P.R. and –M. Obstfeld, International Economics Theory and Policy, Addison-Wesley, Delhi, 2000
5. Salvatore D., International Economics, John Wiley and Sons, Singapore 2002
6. Sodersten Bo and R. Geoffrey, International Economics, Macmillan, London, 1994

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO –XIII	CREDIT	MARKS
ECOEH305	ECONOMICS OF HUMAN DEVELOPMENT	6	100

Course Objectives

This course on Economics of Human Development focuses on the widely accepted global perspective of viewing development as the expansion of peoples' capabilities, capacities and choices. This elective has a relatively strong applied component specifically in relation to India, built into each module.

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Course Outcomes

- Awareness on the concepts and dimensions of Human Development
- Enables to understand the relevance of Human Development Indices

(Lectures

Module 1: Concepts of Human Development 15)

Comparison of growth & development, perspectives on development, Human development basic needs v/s quality of life approach, capability approach, Millennium Development Goals v/s Sustainable Development Goals.

(Lectures

Module 2: Dimensions of Human Development 15)

Empowerment, equity, sustainability, security, Productivity and participation: role of freedom in promoting human development. Multi-dimensionality of poverty: concept of inclusive growth and obstacles to achieve it, Government policy to promote human development with respect to education and health care.

Module 3: Human Development Indices 15)

(Lectures

Need for Indices, GDP, Physical quality of life index (PQLI), Disability Adjusted Life Years (DALY), Social Capability Index, Human Development Index, Human Poverty Index, Gender Related Development Index (GDI), Gender Empowerment Measure comparative analysis for the past three years.

Module 4: Aspects of Human Development

(Lectures

15) Livelihood, Inequality, Gender, Child Labour, Aging Population, Poverty Alleviation, Food Security, Environment, Displacement and Migration, Education and Health, Workers in informal Sector, Need for Social Security- Role Conflict between ILO and WTO, Concept of Human Security.

References:



1. Chelliah Raja J. and R. Sudarshan (ed), Income Poverty and Beyond: Human Development in India, UNDP, Social Science Press, New Delhi 1999.
2. Comim F.M. Qizilbash and S. Alkire (eds), The Capability Approach: Concepts, Measures and Applications, Cambridge Uni. Press, Cambridge, 2007.
3. Dev S. Mahendra, P. Antony, V. Gayathri and R.P. Mamgain, Social Economic Security in India, Institute for Human Development, New Delhi 2001
4. International Labour Organization, A Fair Globalization: Creating Opportunities for All, World Commission on the Social Dimension of Globalization, Geneva, 2004.
5. United Nations Development Programme (UNDP) : Human Development Reports
6. UNDP – India, State Human Development Reports.

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO –XIV	CREDIT	MARKS
ECOIE306	INDIAN ECONOMY	6	100

Course Objectives

The paper aims at building strong fundamentals to varied challenges confronting the Indian economy with special reference to it's developmental challenges. Wherever possible an effort is made to incorporate the discussion on relevant case studies in different sectors of the economy.

Course Outcomes

- Students get familiarized with the sectoral issues to be tackled with the Indian perspective.
- Generate awareness on the solutions to deal with the development challenges of the

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Indian economy in the 21st century globalised world.

(Lectures

Module 1: Characteristics of Indian Economy
15)

Features and Characteristics of the Indian Economy, Trends and Structure, Demographic features, National income, Growth and Structural Change in the Indian Economy, Poverty, inequality and policy implications.

(Lectures

Module 2: Infrastructure and Human Development
15)

Energy; Conventional and Non-Conventional energy development in India, Energy policy, Social infrastructural developments; Education and Health, Recent debates on Human Development in India; Concept and Measurement.

(Lectures

Module 3: Industry and FDI
15)

Industrial Profile of India - Private Sector, Large, Medium and Small Scale Industries, Village Industries, Public Sector, Role and Problems of Public Sector Industries, Small-scale and cottage industries in India-SMEs in India. Recent trends in Industrial growth. Industrial sickness, Exit policy, Role of BIFR, Impact of Globalization: Trends and pattern of FDI in India; Trends and pattern of Indian industry abroad, Export and import component of Indian industrial sector, Industrial Combinations; Causes, Mergers & Amalgamations.

(Lectures

Module 4: The Agricultural Sector
15)

Agricultural Production and Productivity issues, Institutional structure, land reforms in India, technological change in agriculture, Pricing of agricultural inputs and output; Terms of trade between agriculture and industry, Agricultural finance policy, Agricultural Marketing and Warehousing, Issues in food security, Policies for sustainable agriculture.

References



1. Agarawal A.N. (2006): Indian Economy: Problems of Development and Planning , A Division of New Age International (P): Limited, New Delhi.
2. Bawa, R.S. and P.S. Raikhy (Ed.) (1997), Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar.
3. Brahmananda, PR. And V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-state Perspectives, Book well, Delhi.
4. Dutt R and KPM Sundharam (2002): Indian Economy: S. Chand New Delhi.
5. Misra S.K. and V.K. Puri, (2020): Indian Economy, Himalaya, Publishing house, Mumbai.
6. Uma Kapila (2019): Indian Economy-Since Independence-17th Edition, Academic Foundation.

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO -XV	CREDIT	MARKS
ECOED307	ECONOMICS OF DEVELOPMENT	6	100

Course Objectives

The objective of this paper is to integrate the developmental perspectives and theories to enable the students to understand the complexity of developing economies and the related economic challenges. The students get to critically reflect on the major economic ideas in development parlance.

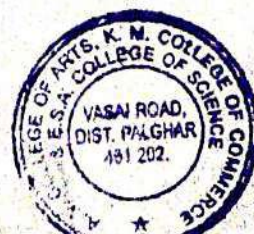
Course Outcomes

- To familiarize students with the developmental aspects of nations
- To acquaint with different theories on growth and development

Module 1 : Approaches to Development 15)

(Lectures

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Capital formation and Economic Development, Role of agriculture and industry in economic Development, Human Capital formation and economic Development, Human Development approach. Institutional Structure and economic Development. Deficit Finance and Economic Development.

(Lectures

Module 2: Poverty and Inequality
15)

Poverty and income distribution, Poverty and problems of measurement, Income inequality, measurements of inequality, Understanding inequality in the developed and underdeveloped worlds. Impact of inequality on the process of development.

Module 3: Theories of Economic Growth and Development
15)

(Lectures

The Harrod-Domar growth model and its application to LDCs, Surplus labour (Lewis), big push (Rosenstein-Rodan), Balanced growth (Nurkse), Unbalanced growth (Hirshman), Solow's model of economic growth, The process of cumulative causation (Myrdal).

Module 4: Population Growth and Developmental Challenges
15)

(Lectures

Population; basic concepts, The theory of demographic transition, Age structures of population, Population Pyramids: high fluctuating, early expanding, late expanding, low fluctuating and natural decrease. Migration; Rural-Rural and Rural-Urban migrations, Cross country migration, Reverse migration, circular migration, The Harris - Todaro Model, Problems of urbanization. Employment markets; Formal sector and informal sector employments and wage rates.

References

1. Meier G. and J. Rauch, Leading Issues in Development Economics, Oxford University Press, 2018.
2. Thirlwall A.P (2018) Growth and Development (8th Edition), 2018
3. Basu, K., Analytical Development Economics: The Less Developed



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- Economy Revisited, The MIT press, 2008.
4. Ray, Debraj, Development Economics, OUP, New Delhi, 2007.
 5. Behrman, JR and TN Srinivasan, Handbook of Development Economics, Elsevier, 1995
 6. Hayami, Yujiro, Development Economics: From the Poverty to the Wealth of Nations, OUP, Great Britain, 2001

MA ECONOMICS (SEMESTER-III)

COURSE CODE	ELECTIVE PAPER: PAPER NO -XVI	CREDIT	MARKS
ECOF308	FINANCIAL ECONOMICS	6	100

Course Objectives

- This paper introduces students to the varied concepts of economics of Finance. It aims at importing knowledge about the basic models of investment and portfolio analysis, including the CAPM. The paper is designed to throw light on the valuation of assets, derivatives and options in addition to patterns of corporate financing which will be based on case study approach.

Course outcomes

- Students will be exposed to the concepts and terminologies of financial economics
- Learners will understand the Basics of investment and learn to understand the present and future value of investment.
- Students will be familiar with the concepts like balance sheet, analysis of the balance sheets and corporate finance.

Module 1: Investment and Portfolio Analysis 15)

(Lectures

Basic theory of interest, discounting and present value; internal rate of return - (IRR), evaluation criteria. fixed income securities; bonds prices and yields. Structure of interest rate. yield curves, spot and forward rates. Portfolio of assets, random asset returns. Mean variance portfolio analysis.

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(Lectures

Module 2: Financial Statements and Analysis
15)

Concepts of Balance Sheet - Statement of profit and loss, profit versus cash flow, consolidated financial statement, standard financial statements. Financial Ratios and analysis, Application of financial statement analysis, Relationship between finance, economics and accounting.

(Lectures

Module 3: Portfolio Analysis
15)

Meaning and diversification of investment portfolio, Portfolio risk, Efficient Frontier and optimal portfolio, Capital Market line, Capital Asset pricing Model (CAPM), Securities Market Line- SML, the beta of an Asset and of portfolio.

Module 4: Corporate Finance
15)

(Lectures

Patterns of corporate financing: stock, debt, preferences, convertibles. Capital structure and the cost of capital, corporate debt and dividend policy. the Modigliani -Miller theorem.

References:

1. David Luenberger, Investment science. Oxford University Press. 1997
2. Hull John C. Options, Futures and other derivatives. Pearson Education. 2005.
3. Thomas Copeland, J. Fred Weston and Kuldeep Shastri. Financial Theory and Corporate Policy, Prentice Hall, 2003.
4. Richard Brealey and Stewart Myers. Principles of Corporate Finance. McGraw Hill. 2002.
5. Prasanna Chandra Financial Management: Theory and Practice, 10th edition, McGraw Hill Education (India) Pvt. Ltd.
6. William Sharpe, Gordon Alexander and J. Bailey. Investment, Prentice Hall of India 2003.

MA (SEMESTER-IV)

COURSE CODE	REVISED PAPER	CREDIT	MARKS
ELECTIVE PAPERS: GROUP - A - SKILL ENHANCEMENT (ANY ONE)			
ECOSME401	XVII STATISTICAL METHODS IN ECONOMICS	6	100



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1. Cochran William G.: Sampling Techniques, John Wiley, 2007.
2. Gujarati D: Econometrics: by Examples, Palgrave Macmillan, 2011
3. Kennedy P.: A Guide to Econometrics, sixth edition, Wiley Blackwell edition, 2008
4. Santhakumaran A., Fundamentals of Testing Statistical Hypotheses, Atlantic, 2001
5. Diez. D., Open Intro Statistics, 4th edition.
6. Nachane, Dilip M., 2006." Econometrics: Theoretical Foundations and Empirical Perspectives," OUP Catalogue, Oxford University Press

MA ECONOMICS (SEMESTER-IV) GROUP - A - SKILL ENHANCEMENT

COURSE CODE	ELECTIVE PAPER: PAPER NO –XVIII	CREDIT	MARKS
ECOQE402	QUANTITATIVE ECONOMICS	6	100

Course Objectives

This paper acquaints the students with advanced mathematical techniques, which are used in economics. The approach will be majorly application based.

Course Outcomes

- The students will be able to apply mathematical techniques to solve complex economic problems.

Module 1: Differential and integral calculus 15)

(Lectures

Derivative of a function: addition, multiplication and Chain rule, Second and Higher Order Differentiation, concavity and convexity of functions, Simple rules of indefinite integration, and definite integration and their applications.

Module 2: Matrices and Determinants 15)

(Lectures

Matrices: Inverse of a matrix– Solution of simultaneous equations using matrices (Cramer's Rule), Transpose, Trace, Adjoint and Inverse of Matrix, Determinants: Types and Properties,



Rank of a Matrix, Application of Matrices in Economics: Input-Output Analysis, Hawkins-Simon Conditions

(Lectures

Module 3: Difference Equations
15)

Solving first-order difference equations – Application of first-order difference equations to financial problems – The cobweb model – Second-order difference equations – economic applications of second – order difference equations – Applications of difference equations: Growth models and lagged market equilibrium models.

(Lectures

Module 4: Linear Programming
15)

Basic concept, formulation of a linear programming problem Its structure and variables – Nature of feasible, basic and optimal solution – Solution of linear programming through graphical and simplex method – Statement of basic theorems of linear programming – Formulation of the dual of a programme and its interpretation – Shadow prices and their uses.

References:

1. Chiang A. C.: Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill, 1984.
2. Dowling Edward T: Introduction to Mathematical Economics, Schaum's Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
3. Lerner Joel J and P. Zima: Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986.
4. Mehta and Madnani: Mathematics for Economists, Sultan Chand & Sons, 2013.
5. Soni R S: Essential Business Mathematics & Business Statistics, Ane Books Pvt. Ltd, 2009.
6. Handry, A.T. (1999), Operations Research, PHI, New Delhi

MA ECONOMICS (SEMESTER-IV) GROUP - A - SKILL ENHANCEMENT



COURSE CODE	ELECTIVE PAPER: PAPER NO -IXX	CREDIT	MARKS
ECOME403	MANAGERIAL ECONOMICS	6	100

Course Objectives

This optional paper requires good understanding of managerial aspects of the firms and its operations. The paper aims at providing varied aspects related to market equilibrium as well as the macroeconomic environment.

Course Outcomes

- Enable students to understand the varied factors determining demand supply aspects leading to market equilibrium.
- Enriches them with the knowledge on theory of markets

Module 1: Introduction to Managerial Economics 15)

(Lectures

Meaning, Nature, Scope and Significance, Corporate Economic Decisions, Economic Optimisation using basic functional relations of Total, Average and Marginal Relations, Marginal Analysis via finding Maximum and Minimum, Linear Programming Problems and Multivariate optimisation (Lagrangian Technique)

Module 2: Market Equilibrium 15)

(Lectures

Determinants of Demand –Industry versus firm Demand, Relationship between Demand curve and demand function, Determinants of Supply -Industry versus firm Supply, Supply relationship between Supply curve and Supply function, Market Equilibrium and Changes in Market Equilibrium

Module 3: Production and Cost

(Lectures



15)

The Production Function-Behaviour of Average and Marginal Products, Law of Diminishing Returns

,Marginal Revenue Product and Optimal Employment, Optimal level of Multiple Inputs, Constrained Optimisation Approach to developing the Optimal Input combination Relationships. Scale and Scope of Production-Costs of Different types, Behaviour of Average and Marginal Costs, Costs in the long run, Economics of Multiplan operation, Learning Curve.

Module 4: Theory of Markets and the Macro Economic Environment (Lectures 15)

Perfect Competition Monopoly and Monopolistic Competition, Oligopoly, Oligopoly and Game Theory. Macro Economic Environment - Economic Transition in India – A quick Review, Liberalization, Privatization and Globalization , Business and Government - Public-Private Participation (PPP) ,Industrial Finance, Foreign Direct Investment(FDIs).

References:

1. Hirschey, M.(2007). Economics for Managers Thomson South-Western, Printed in India by Baba Barkha Nath Printers Haryana.
2. Hirschey, M.(2004). Managerial Economics , Thomson South-Western; Printed in India by Eastern Press Bangalore.
3. Mukherjee Sampat(2005) Business and Managerial Economics, New central Book Agency Ltd Kolkata.
4. Ghosh Geetika & Choudhury, (2005). Managerial Economics, Cengage Learning, New Delhi.
5. James R. McGuigan, R. Charles Moyer, and Frederick H. deB. Harris (2005) Managerial Economics: Applications, Strategy, and Tactics, Tenth Edition, Thomson South-Western Publishers.
6. Michael Baye and Jeff Prince (2018), Managerial Economics & Business Strategy, 9th Edition, McGraw Hill.

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MA ECONOMICS (SEMESTER-IV) GROUP - A - SKILL ENHANCEMENT

COURSE CODE	ELECTIVE PAPER: PAPER NO -XX	CREDIT	MARKS
ECOMB404	MONEY AND BANKING	6	100

Course Objectives

The objectives of the paper are to provide an understanding on operation of monetary forces, evolution of money, developments of central bank and commercial banks, development banking and banking sector reforms. The course objectives of the paper include; to make the learners understand the working of monetary forces, to orient the learners about Money and Banking, to help the learners in realizing operating of monetary forces through multitude of channels - Market, Non-market, Institutional etc. To make understand the students about an evolution of money, developments of commercial banks, central banks, theory relating to banking and banking practices in India and other countries.

Course Outcomes

- The learners will get an information and understanding about banking system, theories of banks and non-banks, developments of central bank and commercial banks, development banking, reforms in banking sector and Basel norms.
- The learners will learn in detail about the operating of monetary forces through multitude of channels - market, non-market, institutional etc.
- The learners will be able to understand an evolution of money, developments of commercial banks, central banks, theory relating to banking and banking practices in India and other countries.

Module 1: Introduction to Money
15)

(Lectures

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Introduction, Definition, Evolution of Money, Nature and Significance of Money, Kinds of Money, Demand and Supply of Money, Monetary Standards, The Commodity Theory of Money Value. A Brief Review of Theories of Money, The Theory of Money Supply. The 'H' Theory of Money Supply.

**Module 2: Banking System and Theory of Banks and Non-Banks
15)**

(Lectures

Introduction: Group Banking and Chain Banking, Unit Banking, Mixed Banking and Correspondent Banking, Advantages and Disadvantages. Banking in United Kingdom: Origin, Banking System and Structure, Bank of England and Evolution of Central Banking, Structure, Management and Functions of Bank of England. Banking in United States of America: Introduction, Commercial Banking in USA, Federal Reserve System, Other Financial institutions , Credit Control Devices, Changing Theories of Commercial Banking , Modern Representation of Banking Theories by James Tobin and E.S. Shaw , Gurley - Shaw Thesis and Non-Bank Financial Institutions (NBFIs).

**Module 3: Development of Commercial Banks and the Central Banking System (Lectures
15)**

Introduction of Commercial Banks, Evolution of Modern Banking System, Structure of Commercial Banking System, Importance, Functions, Process of Credit Creation. Central Banking System: Definition, Changing Concepts of Central Banking, Objectives, Guidelines and Measures of Central Banks , Functions of Central Bank , Role of Central Banks in Developing Countries: Regulatory and Promotional Role, State Ownership of Central Bank.

**Module 4: Development Banking and Banking Sector Reforms
15)**

(Lectures

Introduction of Development Banking: Nature, Financial Appraisal, Liquidity Ratios, Capital Ratios- Technical and Economic Appraisal, Social Cost-Benefit Analysis, Development Finance institutions, Capital Adequacy, Sources of Funds of DFIs - Banking Sector Reforms- Brief review of Banking Legislation, Need for Reforms, Narasimham Committee Reports, Post Reform Scenario-Basel norms I, II and III



References:

1. Basu A.K, (1967), Fundamentals of Banking Theory and Practice, Fourth Edition, Mukerji, Calcutta.
2. Bedi H.L and Hardikar, (2001) Practical Banking Advances, UBS Publishers, 10th edn., New Delhi.
3. Desai Vasant (2017), Development Banking and Financial Intermediaries, Himalaya Publishing House, Mumbai
4. M. Y. Khan (2011), Indian Financial System, Tata McGraw Hill, 7th edition, New Delhi.
5. Mithani and Gordon, (2016), Banking Theory and Practice, Himalaya Publishing House, Mumbai.
6. Srivastava P K.(2020), Banking Theory and Practice, Himalaya Publishing House, Mumbai.

MA ECONOMICS (SEMESTER-IV) GROUP - B – INTERDISCIPLINARY

COURSE CODE	ELECTIVE PAPER: PAPER NO –XXI	CREDIT	MARKS
ECOMMEA405	MATHEMATICAL METHODS FOR ECONOMIC ANALYSIS	6	100

Course Objectives

This paper introduces the students to mathematical techniques which are applied in various areas of research. So the approach would be to teach mathematical applications in Economics.

Course Outcomes

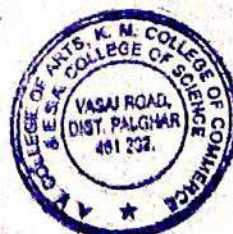
- The students will be able to apply the mathematical techniques to various problems in economics.

Module 1: Introduction to Functions and Derivatives 15)

(Lectures

Graphs, functions and equations- Slope and intercept of a straight line, Higher order functions.

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(Lectures

Module 2: Partial Derivatives

15)

Partial derivatives, Cross partial elasticities, Constrained optimisation, Lagrange multipliers and constraints, Applications in Economics: Homogeneous production functions and returns to scale, Cobb-Douglas production function.

Module 3: Basics of Matrices

15)

(Lectures

Matrices, Determinants and basic operations on matrices: Addition, Multiplication, Transpose, Inverse of a matrix, Solution of simultaneous equations using matrices.

Module 4: Quadratic Equations

15)

(Lectures

Introduction to quadratic equations and deriving their roots, Understanding the nature of roots of quadratic equation: Real, imaginary and complex, Finding out the roots of quadratic equations using Matrices, Estimation of simple and exponential growth rates.

References:

1. Chiang A. C.: Fundamental Methods of Mathematical Economics, 3rd edition, McGraw-Hill, 1984.
2. Dowling Edward T: Introduction to Mathematical Economics, Schaum Outline Series in Economics, Tata McGraw -Hill, New Delhi, 2004.
3. Dowling Edward T: Theory and Problems of Mathematical Methods for Business and Economics, McGraw -Hill, 1993.
4. Mehta and Madnani: Mathematics for Economists, Sultan Chand & Sons ,2013
5. SoniR S: Essential Business Mathematics & Business Statistics, Ane Books Pvt. Ltd , 2009.
6. Sydsaeter, K and P. Hammond,2002, Mathematics for Economic Analysis. Pearson Educational Asia.



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MA ECONOMICS (SEMESTER-IV) GROUP - B – INTERDISCIPLINARY

COURSE CODE	ELECTIVE PAPER: PAPER NO –XXII	CREDIT	MARKS
ECODTP406	DEMOGRAPHY: THEORY AND POLICY	6	100

Course Objectives

This paper provides students an understanding of demographic processes as well as the linkages between population and economic development. The paper aims to familiarised students the major demographic events.

Course Outcomes

- Provides knowledge on the interrelationship between population and economic development
- Equip students with the knowledge on fertility, mortality and migration

Module 1: Population Science, Demography and Economic Development (Lectures 15)

Population Science and Demography, Population Environment and Development, Implications of Population, Sources Of Demographic Data, Malthusian Theory of Population, Theory of demographic transition, Age and Sex composition of Population, Age Pyramids, Ageing Population.

Module 2: Nuptiality and Fertility 15)

(Lectures

Concepts of Nuptiality, Analysis of Marital Status Data, Singulate Mean Age at Marriage, Concepts and Measurements of Cohort and Period Fertility, Rele's Method, Bongaart's Proximate determinants of fertility, socio-economic determinants of proximate variables, indirect estimation of Fertility, Social Engineering.

S.P. Vichar



(Lectures

Module 3: Mortality

15)

Concepts and Analysis of Morbidity, Measurements of Mortality, Infant and Child mortality rates, Standardization of Mortality Rates, Life Table: Concepts, Types, Uses, Method of Construction: Differential and Determinants of Mortality.

(Lectures

Module 4: Migration and Population Projections

15)

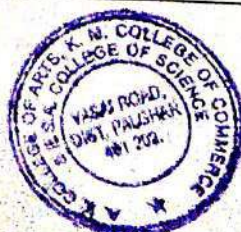
Concepts, Patterns and Measures of Migration, Migration Theories and Models (Ravenstein's, Lee's, Wolpert's and Todaro's Models). Internal and International Migration, Spatial Distribution and Urbanization, Importance of Population Projection.

References:

1. Bhatt M. (2002): On the trial of Missing Indian Females, Economic and Political Weekly, 37(51) (52): 5105-518, 5244-5263.
2. Bhende AA and T. Kantikar, Principles of Population Studies, Himalaya publishers, Mumbai- 2000.
3. Bogau DJ, EE, Arriagas, Douglas L. Anderson, Reading in Population Studies and Methodology, published for United Nations Population Fund by Social Development Center, Chicago, Illinois, 1993.
4. Coale A.J., 1971, Age Patterns of Marriage, Population Studies, 25 (2), PP 193-214.
5. Cahuc Pierre and Andre Zylberberg, Labor Economics, Massachusetts Institute of Technology, 2004
6. Uchikawa Shuji (eds.) Labour Market and Institution in India 1990s and Beyond, Manohar Publishers, New Delhi, 2003.

MA ECONOMICS (SEMESTER-IV) GROUP - B – INTERDISCIPLINARY

COURSE CODE	ELECTIVE PAPER: PAPER NO –XXIII	CREDIT	MARKS
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S.P. Vichare

ECOEEA407	ENVIRONMENTAL ECONOMICS	6	100
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Course Objectives

This paper introduces students to the key fundamentals in environmental economics. It also equips students with tools and methodologies that are applied to analyse environmental problems and policies. Further, the paper enhances their understanding of environmental issues, perceived within the context of natural eco system.

Course Outcomes

- Students will be able to understand the conceptual framework of environmental economics
- It equips students to solve issues related to the environmental field
- It empower students to handle Environmental sustainability projects

Module 1: Introduction to Environmental Economics

(Lectures 15)

Types of goods and services- public, private and common pool resources, externalities and market failure, Pollution as a Public Bad, The equi-marginal principle, Economic efficiency versus equity, Damage functions and abatement costs-Coase Theorem.

Module 2: Environmental impact assessment

(Lectures 15)

Valuation of Natural Resources, Direct and Indirect Methods, Environmental impact assessment, Regional, National and Supranational dimensions of environmental degradation, Global Externalities and Climate Change.

Module 3: Economic Growth and the Environment (Lectures 15)

Limits to growth and Sustainable Development, Economic Growth and environment, Environmental Kuznets Curve, Environment as an economic and social good/asset,

S. P. Vichare



Natural Resource (Exhaustible, renewable, common property resources), Green Accounting.

Module 4: Environmental Policy and Practices

(Lectures 15)

Approaches to environmental policy, Command and control, Environmental Standards, Technology Mandates, Market based instruments - Taxes, subsidies, liability instruments tradable permits; Kyoto Protocol; Rio debate- Relevant Case Studies.

References:

1. Dixon, J. A., and M. M. Hufschmidt, eds. (1986): Economic valuation techniques for the environment: A case study workbook. Baltimore: Johns Hopkin University.
2. Field B.C. (1997): Environmental Economics- An Introduction, McGraw-Hill International Edition, Singapore.
3. Hodge Ian (1995): Environmental Economics, MacMillan Press Ltd., London.
4. Jeroen C.J.M. van den Bergh (2002): Handbook of Environmental and Resource Economics, Edward Elgar Publishing.
5. Jinhua Zhao and Tony Fisher: Notes on Irreversibility, Sustainability and the Limits to Growth, <http://econpapers.repec.org/paper/isugenres/default22.htm>
6. Kolstad Charles (2006): Environmental Economics, Oxford University Press, USA.

MA ECONOMICS (SEMESTER-IV) GROUP - B – INTERDISCIPLINARY

COURSE CODE	ELECTIVE PAPER: PAPER NO –XXIV	CREDIT	MARKS
ECOAPRM408	ECONOMICS OF AGRICULTURAL PRODUCTION AND RURAL MARKETS	6	100



Vichare

Course Objectives

This paper would be helpful to understand the various types of relationships in agriculture: factors and products, problems of instability in production and the functioning of and imperfections in credit markets, labour markets, and land markets in India.

Course Outcomes

- Enable students to understand the production function relationships in the agricultural sector.
- Provide them the knowledge of different sources of credit in agricultural sector
- Enable the students to understand the issues in the labour and land market.

Module 1: Agricultural Production

(15 Lectures)

Production Function Analysis in Agriculture- Factor - Product, Factor -Factor, And Product - Product Production Relationships. Supply Response in Agriculture. Demand For Farm Products- Income Elasticity and Cross Elasticity of Demand for Farm Products. Structure And Types of Agricultural Marketing, Defects, Problems and Remedial Measures, Co-Operative Marketing, Regulated Markets, Agricultural Pricing Policy.

Module 2: Rural Credit Market

(15 Lectures)

Need and types of agricultural credit- Unorganized credit system, Role, Problems & Report of Radhakrishna Committee- Institutional sources- Role and performance of Nationalized Banks, Co-operative Credit Institutions, Regional Rural Banks, NABARD- Micro Finance- Meaning and Role. Problems of agricultural finance- Problem of rural indebtedness- causes, evils, and remedial measures.

Module 3: Labour Markets

(15 Lectures)

Concepts of Work, Skill, and Productivity. Theories of Wages- Free and Unfree Labour. Types Of Employer-Employee Relationships- Determinants of Wage Rates- Gender Based Discrimination- Wage Differentials- Contract Labourers in Rural Markets. Methods of Measurement of Employment and Unemployment.

Module 4: Land and Lease Markets

(15 Lectures)

Segmented Property Rights, Lease Market, Formal and Informal Leases- Economics of Share Tenancy- Crop Sharing Practices in India- Inequality in Distribution of Land Holdings. Size Pattern of Holdings in India, Problems and Causes of Fragmentation and Small Size of Land Holding. Farm Size and Productivity.



References:

1. Heady Earl O., Economics of Agricultural Production and Resource Use, Prentice Hall, New York, 1961.
2. Cheung SNS, The Theory of Share Tenancy, University of Chicago Press, Chicago, 1969.
3. H.V. Nagesh, Forms of Unfree Labour in Indian Agriculture.
4. Daniel and Alice Thorner, Types of Employers- Labourer Relationships in Indian Agriculture.
5. S.K. Rao, Measurement of Unemployment in Rural India, EPW, September, 1973.
6. K. Subbarao, Agricultural Marketing and Credit, ICSSR.

S.P. Vichare



MUMBAI UNIVERSITY

M.A. ECONOMICS

(As Per Choice Based Credit System (CBCS) With Effect
from the Academic Year 2016-17)

Core Courses: (2016-17)

Semester - I Group I

I) Microeconomics - I

Credits: 06

UNIT -1: Consumer Behaviour

Axioms of Rational Choice, Utility function and its existence, revealed preference approach to consumer choice, consumer's optimisation problem, income and substitution effects, indirect utility function and its properties, Roy's identity, Shepherd's lemma and the Slutsky equation

UNIT -2: Production, Cost and Supply

Production: Returns to Scale and varying proportions, production function (Cobb-Douglas, CES and Translog), variations in scale, variations in input proportions, problem of Profit maximization for a firm, Cost: Long run and short run cost curves, cost minimisation, profit function, duality

UNIT-3: Price and Output determination under Perfect Competition

Features of perfect competitions, price and output determination in the long and short run, Equilibrium of the firm, and the industry, existence and stability of General Equilibrium in a pure consumption economy, First and Second Fundamental Theorems of Welfare Economics, welfare effects of price changes, Market failures and the theory of the Second best

UNIT -4: Monopoly:

Monopoly : Its features, Measures market power, price and output determination in a monopoly, the welfare effects of monopoly, first, second and third degree price determination under monopoly, natural monopoly, regulation of monopolies

References:

1. Gravelle H. and Rees R. (2004): Microeconomics, 3rd Edition, Pearson Edition Ltd, New Delhi.
2. Varian H (2000). Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W Norton and Company



Group I II) Macroeconomics-

Credits : 06

Module 1. Macroeconomic Accounting

Stocks and Flows; Output and Income; Income and Expenditure; Saving and Investment; Real and Nominal Income; The open economy

Module 2. Determination of National Income and the Price Level (12 Sessions) The Keynesian Model: IS-LM Analysis, Fiscal and Monetary Policy. The role of expectations; The AS-AD Model; Inflation and Unemployment

Module 3. The Open Economy

Definitions and Concepts: The trade balance, Balance of Payments, Capital Mobility, Automatic adjustment, the classical approach Fixed Exchange Rates: The IS-LM-BP model, Monetary and Fiscal Policy Flexible Exchange Rates: The IS-LM-BP model, Monetary and Fiscal Policy

Module 4. Microfoundations of Macroeconomics

Consumption: Consumption smoothing, temporary and permanent shocks , Investment: The optimal capital stock, irreversibility and investment ,The demand for money: Money, bonds, and private wealth, financial assets Seigniorage: The optimal level of seigniorage

Texts

1. Carlin, Wendy and David Soskice, 2007, *Macroeconomics*, Oxford University Press
2. D'Souza, Errol, *Macroeconomics*, 2012, Dorling Kindersley (India) Pvt Ltd
3. Michl, Thomas, 2009, *Macroeconomic Theory*, PHI Learning



P. Vichare

UNIT 1: Random variables' mean and variance of a random variable, basic laws of probability, Discrete random variables (Geometric, Binomial and Poisson), Continuous distributions (The Normal Distribution), Covariance and Correlation (Pearson's and Spearman's coefficients) , the Law of Large numbers (without proof)

UNIT 2: Tests of Hypothesis: Tests of hypothesis, null and alternative hypothesis, one tailed and two tailed tests, The standard normal distribution and its applications,, the Chi-square distribution and its applications, the t distribution and its application, the F distribution and its application, the Central Limit Theorem (without proof)

UNIT 3: Simple linear regression: Estimation and hypothesis testing, properties of estimators, R square and adjusted R square, the F test in regression, interpreting regression coefficients.

UNIT 4: Problems in simple Linear Regression model: Heteroskedasticity and its consequences, autocorrelation and its consequences, multicollinearity and its consequences.

References:

1. Hatakhar Neeraj R: Principles of Econometrics : an Introduction Using R, SAGE publications, 2010
2. Kennedy P.: A Guide to Econometrics, sixth edition, Wiley Blackwell edition, 2008



P. Vichare

Group (IV) Economics of Development - I

Credit: 06

UNIT 1: Concepts and measures of Growth and Development

Developments in economic thought - History, expectations and development - Economic growth and structural change - Capabilities, entitlements and deprivation - Inequality and growth - Measurement of inequality and poverty - Measurement of development - HDI, GDI, etc. - Role of market and state

UNIT 2: Modern theories of Growth and Distribution

Harrod-Domar Model of growth - Solow model of growth - Approaches to technical change - Convergence - Endogenous growth models of Romer and Lucas - Human capital

UNIT 3: Microeconomics of Development

Segmentation of rural land, labour, capital and credit markets - microfinance - Market inter-linkages - land markets - labour markets and households - Credit market - microfinance - The household model of fertility decisions - Institutions and development

UNIT 4: Macroeconomics of Development

Environment and development - Development and the constraint of natural resources - Environmental problems in Economic Development - Environment and Sustainable Development - Trade and Development - Trade and foreign exchange - Role of international financial and trade institutions - Structural adjustment and stabilization

References:

1. Basu, Kaushik (1998), *Analytical Development Economics*, OUP, New Delhi.
2. Ray, Debraj (2004), *Development Economics*, OUP, New Delhi.



D. P. Vichare

Semester II

i) Public Economics

credits : 06

Module 1: Government in a Market Economy:

Theorems of Welfare Economics: Implications, Lump Sum Taxes and Transfers Rationale for State Intervention: Market Failures and Externalities, Tax and Regulation, Distribution, Social Choice, Voting Rules, Arrow Impossibility Theorem

Module 2: Public Expenditure: Rationale and Evaluation: (12 Hours)

Public Goods: Pure and Local, Optimal provision, Lindahl's Voluntary Exchange Approach, Preference Revelation mechanism, Private provision of Public Goods, Merit Goods, Club Goods Evaluation of Government Expenditure: Elements of Cost-Benefit analysis

Module 3: Taxation: (14 Hours)

Basic Concepts of Tax Theory: Direct vs. Indirect Taxes, Ability to Pay, Horizontal and Vertical Equity. Commodity Taxation: Tax Rules, Optimal Commodity Taxation, Public Sector Pricing Income Taxation: Equity and Efficiency, Taxation and Labour Supply, Optimal Income Taxation (linear and non-linear). Tax Evasion: Basic Model, Auditing and Punishment.

Module 4: Reforms and Government: (10 Hours)

Fiscal Rules: Rationale, International and Indian Experience. Decentralisation: Decentralisation Theorem. India's Federal Structure: Taxation powers, Expenditure responsibilities, Intergovernmental transfers, VAT, GST

References

1. Atkinson A.B. and J. E. Stiglitz: Lectures on Public Economics, New York: McGraw-Hill, 1980
2. Cullis J. and P. Jones: Public Finance and Public Choice, OUP, 1998
3. Hindriks J. and Gareth D. Myles: Intermediate Public Economics, MIT Press, 2006.
4. Myles G.: Public Economics, Cambridge University Press, 1995
5. Oates W.: Fiscal Federalism, Harcourt, Brace Jovanovich, 1972
6. Purohit M.: Value Added Tax, Gayatri Publications
7. Tresch R.: Public Finance: A Normative Theory, Academic Press, 1995



Semester II ii) Mathematical Techniques for Economists Credits : 06

UNIT I:

A set and its elements, basic set theoretic operations, De Morgan's Laws, slope and intercept of a straight line, higher order functions, logarithmic and exponential functions, rules of logarithms and exponentiation, limits of sequences

UNIT 2: Derivative of a function, addition, multiplication and Chain rule, application of derivatives in Economics, Unconstrained optimisation, in Economics, partial derivatives and their applications in Economics, introduction to integration and its applications in Economics

UNIT 3: Constrained optimisation in Economics, Lagrange multipliers and equality constraints, constrained optimisation with inequality constraints, applications in Economics

UNIT 4: Introduction to Matrices, adding and multiplying matrices, transpose and inverse of a matrix, solving simultaneous equations with matrices



Vichan

UNIT 1. Imperfectly flexible prices, Price-setting under imperfect competition, Menu costs, real rigidity and neutrality, Quadratic price adjustments

UNIT 2: . New Classical Economics, the DSGE model, Wealth Effects and the Government Budget Constraint; money/bond finance, The government budget deficit; Ricardian Equivalence

UNIT 3: . New Keynesian Economics, Disequilibrium, multiple equilibria, hysteresis Reconstructing the Keynesian multiplier, The NK model of inflation

UNIT 4. Macroeconomic Policy. Rules versus Discretion, Credibility & Reputation, Dynamic Inconsistency Banks, Financial Intermediaries and Unconventional Monetary Policy Inflation Targeting and Exchange Rates

References

1. Heijdra, Ben J. and Frederick Van Der Ploeg, 2002, *Foundations of Modern Macroeconomics*, Oxford University Press, Oxford
2. Romer, David, 2012, *Advanced Macroeconomics*, McGraw-Hill, Fourth Edition
3. Wickens, Michael, 2011, *Macroeconomic Theory and the Dynamic General Equilibrium Approach*, Princeton University Press



Vicham

UNIT 1: Introduction to Game Theory, normal form games and extensive form games, dominant strategy equilibrium, Prisoner's dilemma, Nash Equilibrium in Pure and Mixed strategies, sub game perfection, Uncertainty and Choice under uncertainty, Certainty Equivalence, measures of Risk Aversion,

UNIT 2: Oligopoly and its features, Cournot Model, Bertrand Model, back ward induction and Stackelberg model, comparison with monopoly, oligopoly in repeated games and tacit collusion, limit pricing and entry deterrence in monopoly.

UNIT 3: Moral hazard and adverse selection, market for lemons, Principle –agent models, optimal contracts under symmetric information, contracts under asymmetric information,, screening and signalling, applications.

UNIT 4: Alternative Theories of the Firm :, Morris model of managerial enterprise, Williamson's model of managerial discretion, behavioural theories of the firm, Full cost pricing principle, existence, purpose and boundries of firms, transactions costs, resource based, knowledge based and transaction based theories of the firm

References

1. Gravelle H. and Rees R .(2004) : Microeconomics., 3rd Edition, Pearson Edition Ltd, New Delhi.
2. Varian H (2000): Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W.Norton and Company
3. Gibbons R. A Primer in Game Theory, Harvester-Wheatsheaf, 1992



S.P. Vichare

Economics of Agricultural Production and Rural Markets

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course would be helpful to understand the various types of relationships in agriculture: factors and products, problems of instability in production, the functioning of and imperfections in credit markets, labour markets, and land markets.

Module 1: Economics of Agricultural Production, Resource Use and Instability in Agriculture: (12 Hours)

Resource and input use - Important production relationships - Economics of input and product substitution - Imperfections in product and input markets in developing agriculture - Sources of price variability and income instability - Rationale for and types of government intervention for price support and reduction in instability - Alternative concepts of cost of cultivation and determination of minimum support prices in India - Role and optimum size of buffer stocks

Module 2: Rural Credit Markets: (12 Hours)

Characteristics of rural credit markets, credit fragmentation - Organized and unorganized sectors - Theories of informal credit markets: Lender's Risk Hypothesis, Default and collateral, Credit rationing:- Default, Informational asymmetries - Moral hazard - Evolution of credit systems in India - Role and Performance of Commercial Banks, Co-operative Credit Institutions, Regional Rural Banks, NABARD and Micro-credit through SHGs in India, imperfections in rural credit markets in India

Module 3: Labour Markets: (12 Hours)

Concepts of work, skill and productivity - Methods of measurement of employment and unemployment - Free and unfree labour - Types of employer-employee relationships - Determinants of wage rates - Labour market segmentation - Gender-based discrimination - Biases in data sources - Wage Differentials - Contract Labourers in rural markets

Module 4: Land and Lease Markets: (12 Hours)

Types of farming - Historical evolution - Segmented property rights - Characteristics and functioning - Economic, extra-economic and legal restrictions - Lease market - Formal and informal leases - Economics of share tenancy - Crop-sharing practices in India - Inequity in distribution of holdings - Market interlocking and interlinkages - Analysis of rural classes - Contract Farming



B. P. Vichare

References:

Essential Readings

1. Heady Earl O., Economics of Agricultural Production and Resource Use, Prentice Hall, New York, 1961 (Module 1)
2. Kahlon A.S. and D.S. Tyagi, Agricultural Price Policy in India, Allied Publishers Pvt. Ltd., New Delhi 1983 (Module 1)
3. BasuKaushik, Agrarian Structure and Economic Underdevelopment, Harwood, Switzerland, 1990 (Modules 2, 3, 4)
4. Dantwala M.L. (Ed), Indian Agricultural Development Since Independence, (Second Edition) Oxford and I.B.H. Pvt. Ltd., 1991 (Module 2)

S.P. Vicham



Economics of Labour Markets

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: Labour market issues are important for students of Micro, Macro, and Industrial Economics. The course sheds light on a range of new developments and a host of issues studied by generations of labour market experts. It captures the interplay of various factors in the labour market by describing demand/supply aspects, wages, employment, unemployment, the cost of labour, workers' participation and impact of new labour policies in the labour market. The course will be offered in the third semester.

Module 1: Nature of the Labour Market: (10 Hours)

Concept of labour market, Characteristics, Types, Search in labour markets, The theory of Human Capital, Investment in Human Capital, Costs and life-time benefits to education

Module 2: Approaches in Labour Markets: (12 Hours)

The theory of labour demand; time period and types of markets, Industry demand for labour, Determinants of labour demand, The theory of supply, Work-leisure choice in indifference curves, Budget constraints, Utility maximization, Backward-bending labour supply curve and its applications,

Module 3: Wage Issues in Labour Markets: (14 Hours)

Theories of Wages, Wages in different markets, Wage structure and components of wages, Share of wages, Distribution and Inequality of wage income, Male-female wage differentials, Inter-Sectoral wage differentials, Contract labour, Properties of contractual wages, Labour market rigidities and flexibilities, Wage and output relations in India during pre- and post-reform period

Module 4: Labour Markets in India: (12 Hours)

Linkages in labour markets, role of risk, Information and incentives, Dualism and segmentation, Labour market flexibility, Employee turnover, Migrant labour, State and labour markets, Impact of trade unions on productivity and wages, Minimum wages, Social security, Occupational safety and security, Wages and incomes policy in India, Impact of liberalization and globalisation

S.P. Vichare



References:

Essential Readings

1. Bhattacharya BB and S Sakhivel, Economic Reforms and Jobless Growth in India in the 1990s, The Indian Journal of Labour Economics, Volume 48, No.2, 2005, pp. 243-258
1. Bhagoliwal T.N., Economics of Labour and Industrial Relations, SahityaBhawan, Agra, 1985
2. Bloom Gordon F and Northrup Herbert R, Economics of Labour Relations, Richard D IrwinInc, Homewood, 1973
3. Cahuc Pierre and Andre Zylberberg, Labor Economics, MIT Press, 2004
4. Government of India, Report of Second National Commission on Labour, 2002
5. Hamis-White Barbara and SinhaA mushree, Trade Liberation and India's Informal Economy, Oxford University Press, New Delhi, 2007
6. Sapsford David and ZafirisTzannatos, The Economics of the Labour Market, Macmillan, London, 1993
7. Singh Jwitesh Kumar, Labour Economics, Deep and Deep Publishers, Delhi, 1998
8. UchikawaShuji (eds.), Labour Market and Institutions in India 1990s and Beyond, Manohar Publishers, New Delhi, 2003
9. UnniJeemol and Uma Rani, Employment and Income in the Informal Economy: A Micro Perspective, in RenanaJhabvala, Ratna M Sundaram and JeemolUnni (eds) Informal Economy Centre-stage: New Structures of Employment, Sage Publications, New Delhi, 2003. 26

S.P. Vichare



Trade Unions and Industrial Relations in India

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course attempts to provide a basic conceptual understanding of the economics of trade unions and industrial relations in India. The syllabus also includes the empirical relevance of theories with suitable examples from a practical industrial relations viewpoint. Such an attempt will be strengthened to enable familiarity with relevant data along with their limitations.

Module 1: Economics of Trade Unions: (9 Hours)

Meaning, Concept, Evolution and Role of Trade Unions. Approaches to the Origin of Trade Unions. Bargaining Theory of Wages, Impact of unions on productivity and wages, Employment Security and Efficiency, Unorganised sector

Module 2: Industrial Relations: (12 Hours)

Definition and scope of industrial relations, Approaches to Industrial Relations: Macro Approaches- System Approach and Class Conflict Approach, Micro Approaches- Taylorism, Fordism and Post-Fordism, Neo-Fordism, Pluralism, Human Relations School and Organisational Behaviour Approach.

Module 3: Industrial Relations in India: (15 Hours)

Trade Unions and Workers: Industrial Sociology of workers in India, History, growth and structure of trade unions, Independent and white collar unions in India. Trade Unions and Contract Workers. Employer's Organisations: Role of managerial class in industrial relations. Industrial conflict: Forms of conflict, strikes, lockouts, absenteeism, employee turnover, causes and consequences of and trends in industrial disputes.

Module 4: Role of the State in Industrial Relations in India: (12 Hours)

Labour Policy in India: Pre and Post-Reform scenario, Impact of Globalisation- Tripartism, Labour Legislation affecting industrial relations: Statutory and Non-Statutory measures to settle industrial disputes. Workers Participation in Management. Voluntary Retirement Schemes, Social Security Measures, Unemployment Insurance. Occupational Safety and Health Management Systems. India and the ILO.

S.P. Vichare



References:

Essential Readings

1. Amin, Ash (Ed.), Post-Fordism: A Reader, Blackwell, Oxford, 1994 (Module 2)
2. Government of India, Ministry of Human Resource Development, Report of Second National Commission on Labour, 2002 (Module 3, 4)
3. Hicks J.R., The Theory of Wages, Clarendon Press, Oxford, 1932 (Module 1)
4. Morappa, Anu, Industrial Relations, Tata McGraw Hill, New Delhi, 2005. (Module 4)
5. Pencavel, John, Labour Markets under Trade Unionism: Employment, Wages and Hours, Basil Blackwell, Cambridge, Massachusetts, 1991 (Module 1)
6. Ramswamy, E.A. and Uma Ramswamy, Industry and Labour, Oxford University Press, Bombay 1981 (Module 3)
7. Rees, Albert, The Economics of Trade Unions, University of Chicago Press, Chicago, 1973 (3rd Edition) (Module 1)
8. Roy, J. Adams (eds.), Comparative Industrial Relations, Harper Collins Academic, London, 1991. (Module 2, 4)



Agricultural Development and Policy

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course aims to enhance the students' understanding of agricultural development. Starting from basic questions like what factors lead to agricultural development or why does the share of agriculture in GDP go down once economies start developing, the course tries to enhance the students' awareness on contemporary debates in the literature, and leads them to analysis of current governmental policies and strategies for surviving in the globalizing world. Questions to be asked for the post 1980 period.

Module 1: Theories of Agricultural Development: (12 Hours)

Role of agriculture in a developing economy vis-à-vis a developed economy; Theories of agricultural development (Lewis, Schultz, Mellor, Hayami and Ruttan)

Module 2: Sustainable Agricultural Development and Food Security: (12 Hours)

Impact of green revolution; Models of spread of technology and experiences in input use efficiency; Measurement and strategies for sustainable development; Food security: Concept, measurement, magnitude, and critical evaluation of government policies

Module 3: Competitiveness of Agriculture Products and Marketing: (12 Hours)

Measurement of efficiency of agricultural products in international markets; Efficiency of agricultural markets in India; Form and impact of government intervention in the markets and its effects on efficiency; Commodity markets: operation and likely impacts; Strategies for surviving in a globalizing world

Module 4: History and Policies for Agricultural Development in India: (12 Hours)

Trends in production since 1950; National Food Policy; Agriculture Policy; Area, productivity, employment and wage rate analysis; Trends in India's agricultural exports and imports and implications



Vichare

References:

Essential Readings

1. BasuKaushik, Analytical Development Economics, Oxford University Press, 1998 (Module1).
2. Bhalla G S., Globalization and Indian Agriculture, Volume 19 of the State of the Indian Farmer Series. Academic Foundation, 2004 (Module 3)
3. Dreze Jean and AmartyaSen, Hunger and Public Action, Oxford University Press, 1989 (Module2)
4. Lewis Arthur, Economic Development with Unlimited supply of labour, Manchester School of Economics and Social Studies 22: 139-91, 1954 (Module 1)
5. Mellor J and Mudahar M, in Agriculture in Economic Development: Theories, findings and Challenges in Asian context in A Survey of Agricultural Economics Literature, Edited by LeeMartin. University of Minnesota Press, 1992 (Module 1)
6. Norton George and Jeffery Alwang, Introduction to Economics of Agricultural Development, McGraw Hills, New York, 1993 (Module 1)
7. Sawant S D (2002), Indian Agriculture: Past developments and policies for the future, Dantwala Monograph Series, No. 4, 2002 (Module 4)



INTERDISCIPLINARY/CROSS STUDIES Semester IV

International Finance

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This elective course, to be offered in the fourth semester, requires a good understanding of Macroeconomics. This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in the context of globalization. A good understanding of International Trade and Trade Policies is desirable.

Module 1: Foreign Exchange Rates and Markets: (12 Hours)

Foreign Exchange Rates: Fixed, Flexible, Nominal, Real and Effective Exchange Rates, Purchasing Power Parity and Interest Parity. Foreign Exchange Markets: Spot, Forward, Futures and Options Currency Markets. Foreign Exchange Risk and Exposure: Exposure, Risk and Parity Relationship, Accounting Exposure versus Real Exposure, Operating Exposure, Hedging Risk and Exposure.

Module 2: Balance of Payments: (12 Hours)

Balance of Payments: Current Account Balance and Capital Account Balance, Official Reserve Transactions, Relationship between Balance of Payments and National Income Accounts. Approaches to Balance of Payments Adjustments: Elasticity, Absorption, Monetary and Portfolio-balance Approaches

Module 3: International Investment and Financing: (12 Hours)

Cash Management: Investment and Borrowing Criterion with Transaction Costs- International Dimensions of Cash Management. Portfolio Investment: International Capital Asset Pricing- Settlement of International Portfolio Investments. Capital Budgeting for Foreign Investments: Project Selection, Cash Flows, Discount Rates, Growth and Concerns about Multinationals. International Financing: Equity Financing, Bond financing, Bank financing

Module 4: International Financial Institutions: (12 Hours)

Gold Standard and Gold Exchange Standard: International Monetary Fund- International Reserves- Special Drawing Rights. Theory of Optimum Currency Areas: International Policy Co-ordination, Currency Board, International Financial and Currency Crisis. International Debt: Measures of Indebtedness-International Debt Crisis 30

S. A. Nishane



References:

Essential Readings

1. Kenen Peter B, The International Economy, Cambridge University Press, New York, 2000 Chapters: 12, 13, 14, 15, 16, 17, 18 and 19 (Modules 2 and 4)
2. Krugman P. R. and Obstfeld M., International Economics-Theory and Policy, Addison-Wesley, Delhi, 2000 Chapters: 12, 15, 16, 20 and 22 (Modules 2 and 4)
3. Levi Maurice D., International Finance, Routledge, New York, 2005 Chapters: 2, 3, 4, And 9 to 18 (Modules 1, 2 and 3)
4. Pilbeam Keith, International Finance, Palgrave, New York, 1998 Chapters: 14 and 15. (Module-4).
5. Salvatore Dominick, International Economics, John Wiley and Sons, Singapore, 2002 Chapter: 14, (Module 1)
6. Sodersten Bo and Reed Geoffrey, International Economics, Macmillan, London, 1994 Chapters: 23, 25, 30 and 31) (Modules 2 and 4)
7. Ugur Mehmet, (edited), An Open Economy Macroeconomics Reader, Routledge, London, 2002 Chapters: 16, 17, 19, 20, 21 and 22 (Modules 2 and 4)

S.P. Vichant



Economics of Human Development

Number of Credits: 6

Pattern of Evaluation: Non-Standard

Preamble: This course on the Economics of Human Development focuses on the widely-accepted global perspective of viewing development as the expansion of people's capabilities, capacities and choices. This people-centric analytical framework for designing and assessing public policy interventions has several implications at macro, meso and micro levels both nationally as well as internationally. This elective has a relatively strong applied component specifically in relation to India that is in-built into each module.

Non-Standard Evaluation Pattern: The evaluation be done through 40 marks of continuous evaluation and a 60 marks end-semester examination. The 40 marks evaluation will consist of a mid-term examination of 20 marks (two questions to be attempted over one hour) and a project of 20 marks on Modules 3 and 4. The project topics will be announced by the 4th teaching week of the semester and the projects should be in by the 10th teaching week. All modules will carry equal weight for the three hour end-semester examination.

Module 1: Concepts of Human Development: (12 Hours)

Growth and Development compared – Perspectives on development – Definition of human development – Basic Needs Approach – Quality of Life Approach – Capability Approach – Human rights – Millennium Development Goals

Module 2: Dimensions of Human Development: (12 Hours)

Empowerment, equity, sustainability, security, productivity and participation – Role of freedoms in promoting human development – Multi-dimensionality of poverty – Concept of inclusive growth – Role of civil society, NGOs, and people's organizations – Obstacles to inclusive growth – Impact of globalization

Module 3: Measurement: (12 Hours)

Need for indices - GDP – Physical Quality of Life Index (PQLI), Disability Adjusted Life Years (DALY), Social Capability index – Human Development Index – Human Poverty Index – Gender Related Development Index – Gender Empowerment Measure

Module 4: Aspects of Human Development: (12 Hours)

Livelihoods – Inequalities – Gender – Child labour – Aging population – Poverty alleviation - Food Security – Environment – Displacement – Indigenous groups – Migration - Education and Health – Workers and Informal Sector – Social Security – Human security – Conflict 19

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References:

Essential Readings

1. Chelliah Raja J and R. Sudarshan (ed), Income Poverty and Beyond: Human Development In India, UNDP, Social Science Press, New Delhi, 1999
2. Comim F, M. Qizilbash and S. Alkire (eds), The Capability Approach: Concepts, Measures and Applications, Cambridge University Press, Cambridge, 2007
3. Costanza R, B. Low, E. Ostrom and James Wilson (ed), Institutions, Ecosystems and Sustainability, Lewis Publishers, Boca Raton, 2001
4. Dev S. Mahendra, P. Antony, V. Gayathri, and R P Mangain, Social and Economic Security in India, Institute for Human Development, New Delhi, 2001
5. Fukuda-Parr S. and Shiva Kumar A K (ed), Readings in Human Development: Concepts, Measures and Policies for a Development Paradigm, Oxford University Press, New Delhi, 2003
6. Grinspun, A. (ed), Choices for the Poor, Lessons from National Poverty Strategies, UNDP, New York, 2001
7. International Labour Organization, A Fair Globalization: Creating Opportunities for All, World Commission on the Social Dimension of Globalization, Geneva, 2004
8. International Labour Organization: World Employment Reports
9. Meier G M and Stiglitz J E (eds), Frontiers of Development Economics, Oxford University Press, New York, 2001
10. Sen Amartya, Development as Freedom, Oxford University Press, New Delhi, 1999
11. Sen Amartya and Jean Dreze, India: Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1998
12. United Nations Development Programme (UNDP), Human Development Reports 1990-2004, Oxford University Press, New York
13. United Nations Development Programme (UNDP) – India, State Human Development Reports, 2003 – 2006, Oxford University Press, New Delhi.

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ABILITY ENHANCEMENT SKILLS Semester IV

Industrial Economics

Number of Credit: 6

Pattern of Evaluation: Standard

Preamble: Ability Enhancement Course, to be offered in the fourth semester, requires a good understanding of both Microeconomics and Macroeconomics. This course aims at providing a theoretical exposition of the behaviour of the firm, market structure and industrial finance with some issues and relevant empirical evidence of Indian industries.

Module 1: Theory of the Firm: (14 Hours)

Firm Competition and Performance: Effects of Monopoly Power- Determinants of Firm Structure- Mergers- Horizontal and Vertical- Conglomerate Integration. Market Structure: Patterns of Market Structure- Determinants of Market Structure- Economies of Scale- Product Differentiation- Capital Requirements. Pricing Strategy in Oligopoly: Theories of Interdependence- Tacit Collusion and Price Leadership- Limit Pricing.

Module 2: Technical Change: (10 Hours)

Market Concentration: Measures of Market Concentration. Advertising: Optimal Advertising- Advertising and Market Structure- Cost of Advertising. Invention and Innovation: Process and Product Innovation- Effects of Innovation on Welfare and Employment- Adoption and Diffusion of Innovation.

Module 3: Financial Analysis: (14 Hours)

Financial Analysis: Funds Flow- Cash Flow Statements- Balance Sheet- Income Statement (Profit and Loss Account)-Ratio Analysis- Multi-Period Compounding- Continuous Compounding. Investment Appraisal: Nature of Investment Decisions- Net Present Value Method- Internal Rate of Return- Discounted Payback Period. Cost of Capital: Determining Components of Cost of Capital- Capital Asset Pricing Model (CAPM)- Weighted Average Cost of Capital (WACC). Capital Structure: Optimum Capital Structure- Modigliani-Miller Hypothesis- CAPM and Capital Structure.

Module 4: Indian Industry: (10 Hours)

Industrial Growth: Trends in Industrial Growth in India-Industrial Location (factors) and Location Policy in India. Small-Scale Industries: Definition-Role-Policy-Issues and Performance. Public Enterprises in India: Performance and Constraints. Competitiveness of Indian Industries: Competition Policy and Foreign Direct Investment. 43

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References:

Essential Readings

1. Ahluwalia I. J., Industrial Growth in India- Stagnation since the mid-sixties, Oxford University Press, Delhi, 1985 (Module 4)
2. Hay J and Morris D. J., Industrial Economics- Theory and Evidence, Oxford University Press, (Latest Edition) (Module 2)
3. Koutsoyiannis A., Modern Microeconomics, ELBS/Macmillan, Hong Kong, 1985 (Module 1)
4. Martin Stephen, Industrial Economics- Economic Analysis and Public Policy, Macmillan Publishing Company, New York, 1988/latest edition (Module 1)
5. Mohanty, Binode, (eds.), Economic Development Perspectives, Vol. 3, Public Enterprises and Performance, Common Wealth Publishers, New Delhi, 1991 (Module 4)
6. Mookherjee Dilip (eds.), Indian Industry- Policies and Performance, Oxford University Press, Delhi, 1998 (Module 4)
7. Pandey I M., Financial Management, Vikas Pub. House Pvt. Ltd., New Delhi, 2000 (Module 3)
8. Shepherd W. C., The Economics of Industrial Organization, Prentice Hall, Inc., London, 1985 (Modules 1 and 2)
9. Vepa R. K., Modern Small Industry in India, Sage Publications, 1988 (Module 4)

S.P. Nicholas



Demography: Theory and Basic Analysis

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The course is designed to provide an understanding of demographic processes including an in-depth knowledge of linkages between population and economic development. It introduces major developments in demographic concepts by highlighting the sources of demographic data, fertility, mortality, migration and population projection.

Module 1: Population Science, Demography and Economic Development: (10 Hours)

Population and Economic Development, Population and Environment, Implications of Population Growth on Regional Imbalances, Population Science and Demography, Sources of Demographic Data, Malthusian Theory of Population, Theory of Demographic Transition, Age and Sex Composition of Population, Age pyramids, Ageing Population.

Module 2: Nuptiality and Fertility: (14 Hours)

Basic concepts of Nuptiality, Analysis of Marital Status Data, Singulate Mean Age at Marriage: Synthetic Cohort and Decadal Synthetic Cohort Method, Concepts and measurements of Cohort and period fertility, Rele's Method and Reverse survival method in fertility analysis, Bongaart's Proximate Determinants of Fertility, Socio-Economic Determinants of Proximate Variables, Indirect Estimation of Fertility Rates, Davis's Intermediate Variables framework of Fertility, Age Patterns of Fertility.

Module 3: Mortality: (12 Hours)

Basic concepts and analysis of Morbidity, Concepts and Measurements of Mortality, Infant and Child mortality rates, Standardisation of Mortality Rates, Life tables: Concepts, Types, Uses, Methods of construction; Differentials and Determinants of Mortality.

Module 4: Migration and Population Projections: (12 Hours)

Concepts, Patterns and Measures of Migration, Migration Theories and Models (Ravenstein's, Lee's, Wolpert's and Todaro's model), Internal and International Migration, Spatial Distribution and Urbanisation, Importance of Population Projection, Methods of Population projection: Mathematical and components methods.

S.P. Vichor



References:

Essential Readings

1. Bhatt M. (2002): On the Trail of Missing Indian Females, Economic and Political Weekly, 37(51) (52):5105-518, 5244-5263.
2. Bherle AA and T. Kantikar, Principles of Population Studies, Himalaya Publishers, Mumbai, 2000
3. Bogue DJ, EE Ariegas, Douglas L. Anderson, Reading in Population Studies and Methodology. Published for United Nations Population Fund by Social Development Center, Chicago, Illinois, 1993
4. Coale, A.J., 1971, Age Patterns of Marriage, Population Studies, 25(2), pp. 193-214
5. Henry, S. Shryock, The Methods and Materials of Demography, Vol. 1 and 2, U.S. Department of Commerce, Bureau of Census, Washington D.C. 1971, pp. 283-298 and 549-578
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6. International Institute for Population Sciences (IIPS), National Family Health Survey, (NFHS) 1,2,3, Mumbai, 1992-93; 1998-99; 2006-07
7. International Institute for Population Sciences (IIPS), Reproductive and Child Health Survey, Mumbai, 2002-04
8. Lutz, Wolfgang, Distributional Aspects of Human Fertility: A Global Comparative Study, Academic Press, 1989, New York
9. Mishra BD, An Introduction to Demography, South Asian Publishers Pvt. Ltd, New Delhi, 1981
10. Mitra RG, Understanding patterns of Migration from Census 2001 Data, Population, 2002
11. Stabilisation and Development, Council of Cultural Growth and Cultural Relations, Cuttack
12. Preston Samuel, Patrick Heuvelin & Michel Guillot, Demography: Measuring and Modelling Population Processes, Blackwell, Cornwall, 2001
13. Sydney HC, Population Theories and Economic Interpretation, Routledge, London, 1968.

S.P. Vichare



UNIVERSITY OF MUMBAI

No. UG/46 of 2017-18

CIRCULAR:-

A reference is invited to the syllabi relating to the Master of Arts (M.A.) Programme vide this office Circular No.UG/75 of 2012-13, dated 17th October, 2012 and The Head, University Department of Economics and the Principals of the affiliated Colleges in Arts are hereby informed that the recommendation made by the Board of Studies in Economics at its meeting held on 22nd April, 2017 has been accepted by the Academic Council at its meeting held on 11th May, 2017 vide item No.4.83 and that in accordance therewith, the revised syllabus as per the (CBCS) of M.A. Economics (Sem III & IV), which is available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2017-18.

MUMBAI - 400 032

15th July, 2017

To

(Signature)
15/7/17
(Dr.M.A.Khan)
REGISTRAR

The Head, University Department of Economics and the Principals of the affiliated Colleges in Arts

A.C/4.83/11/05/2017

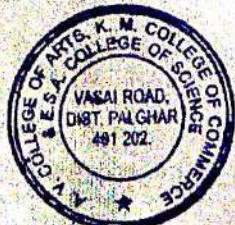
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15th July, 2017

Copy forwarded with Compliments for information to:-

- 1) The Co-ordinator, Faculty of Arts,
- 2) The Offg. Director, Board of Examinations and Evaluation,
- 3) The Director of Board of Student Development,
- 4) The Professor-cum-Director, Institute of Distance and Open Learning (IDOL),
- 5) The Co-Ordinator, University Computerization Centre,



S.P. Vichare

(Signature)
15/7/17
(Dr.M.A.Khan)
REGISTRAR

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UNIVERSITY OF MUMBAI



Revised Syllabus for the M.A.

Program: M.A.

Course: Economics

Semester III & IV

(As per Choice Based Credit System with effect
from the Academic Year 2017-2018)



P. Vichare

ELECTIVES - SEMESTER III

International Trade: Theory and Policy

Number of Credits : 6

Pattern of Evaluation: Standard

Preamble: This elective course, to be offered in the third semester, requires a good understanding of Microeconomics. The course aims at providing a theoretical exposition of bases, effects and the restrictions on free flow of international trade with the empirical evidence.

Module 1: Classical Trade Theory: (10 Hours)

Absolute and Comparative Advantage of Trade; Real and Opportunity Cost Approaches; Gains from Trade, Reciprocal Demand and Offer Curves; Terms of Trade. Revealed Comparative Advantage

Module 2: Neo-Classical Trade Theory: (14 Hours)

The Heckscher-Ohlin (H-O) Theory; Factor Price Equalization Theorem and Generalization to n Factors and Goods; Leontief Paradox, Rybczynski Theorem; Trade and Growth

Module 3: Modern Trade Theory: (12 Hours)

Concept of Intra-industry Trade, Imperfect Competition and Trade- The Neo-Heckscher-Ohlin Models- Favley Model, Neo-Chamberlinian Models- Krugman Model, Oligopolistic Models- Brander-Krugman Model, Reciprocal Dumping Model- Iceberg Model. Trade in Services

Module 4: Trade Policy: (12 Hours).

Instruments of Trade Policy; Tariffs and Welfare, Optimum Tariff, Tariff and Real Rewards to Factors of Production, The Stolper-Samuelson Theorem, Metzler's Paradox, Theory of Customs Union, Quotas and Export Subsidies. Gains from Trade and Regional Agreements

References:

Essential Readings

1. Feenstra R. C., Advanced International Trade- Theory and Evidence, Princeton University Press, Princeton, 2004 (Modules 2, 3 and 4)
2. Grimwade Nigel, International Trade, (Second Edition), Routledge, London, 2001 (Modules 3 and 4).
3. Grubel H. G. and P. J. Lloyd, Intra-industry Trade, Macmillan, London, 1975 (Module 3)
4. Haberler G., A Survey of International Trade Theory, International Finance Section, Department of Economics, Princeton University, 1961 (Module 1)
5. Krugman P. R. and M. Obstfeld, International Economics-Theory and Policy, Addison-Wesley, Delhi, 2000 (Modules 2 and 3)
6. Salvatore D., International Economics, John Wiley and Sons, Singapore, 2002 (All Modules)
7. Södersten Bo and R. Geoffrey, International Economics, Macmillan, London, 1994 (Modules 2, 3 and 4)



Economics of Agricultural Production and Rural Markets

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course would help to understand the various types of relationships in agriculture: factors and products, problems of instability in production, the functioning of and imperfections in credit markets, labour markets, and land markets.

Module 1: Economics of Agricultural Production, Resource Use and Instability in Agriculture: (12 Hours)

Resource and input use – Important production relationships – Economics of input and product substitution – Imperfections in product and input markets in developing agriculture – Sources of price variability and income instability – Rationale for and types of government intervention for price support and reduction in instability – Alternative concepts of cost of cultivation and determination of minimum support prices in India – Role and optimum size of buffer stocks

Module 2: Rural Credit Markets: (12 Hours)

Characteristics of rural credit markets, credit fragmentation – Organized and unorganized sectors – Theories of informal credit markets: Lender's Risk Hypothesis, Default and collateral, Credit rationing: Default, Informational asymmetries – Moral hazard – Evolution of credit systems in India – Role and Performance of Commercial Banks, Co-operative Credit Institutions, Regional Rural Banks, NABARD and Micro-credit through SHGs in India, imperfections in rural credit markets in India

Module 3: Labour Markets: (12 Hours)

Concepts of work, skill and productivity – Methods of measurement of employment and unemployment – Free and unfree labour – Types of employer-employee relationships – Determinants of wage rates – Labour market segmentation – Gender-based discrimination – Biases in data sources – Wage Differentials – Contract Labourers in rural markets

Module 4: Land and Lease Markets: (12 Hours)

Types of farming – Historical evolution – Segmented property rights – Characteristics and functioning – Economic, extra-economic and legal restrictions – Lease market – Formal and informal leases – Economics of share tenancy – Crop-sharing practices in India – Inequity in distribution of holdings – Market interlocking and interlinkages – Analysis of rural classes – Contract Farming

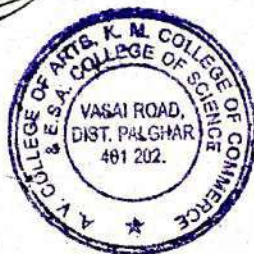


References:

Essential Readings

1. Heady Earl O., Economics of Agricultural Production and Resource Use, Prentice Hall, New York, 1961 (Module 1)
2. Kahlon A.S. and D.S. Tyagi, Agricultural Price Policy in India, Allied Publishers Pvt. Ltd., New Delhi 1983 (Module 1)
3. BasuKaushik, Agrarian Structure and Economic Underdevelopment, Harwood, Switzerland, 1990 (Modules 2, 3, 4)
4. Dantwala M.L. (Ed), Indian Agricultural Development Since Independence, (Second Edition) Oxford and I.B.H. Pvt. Ltd., 1991 (Module 2)

S. P. Vichare



Economics of Labour Markets

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: Labour market issues are important for students of Micro, Macro, and Industrial Economics. The course sheds light on a range of new developments and a host of issues studied by generations of labour market experts. It captures the interplay of various factors in the labour market by describing demand/supply aspects, wages, employment, unemployment, the cost of labour, workers' participation and impact of new labour policies in the labour market. The course will be offered in the third semester.

Module 1: Nature of the Labour Market: (10 Hours)

Concept of labour market, Characteristics, Types, Search in labour markets, The theory of Human Capital, Investment in Human Capital, Costs and life-time benefits to education

Module 2: Approaches in Labour Markets: (12 Hours)

The theory of labour demand; time period and types of markets, Industry demand for labour, Determinants of labour demand, The theory of supply, Work-leisure choice in indifference curves, Budget constraints, Utility maximization, Backward-bending labour supply curve and its applications,

Module 3: Wage Issues in Labour Markets: (14 Hours)

Theories of Wages, Wages in different markets, Wage structure and components of wages, Share of wages, Distribution and Inequality of wage income, Male-female wage differentials, Inter-Sectoral wage differentials, Contract labour, Properties of contractual wages, Labour market rigidities and flexibilities, Wage and output relations in India during pre- and post-reform period

Module 4: Labour Markets in India: (12 Hours)

Linkages in labour markets, role of risk, Information and incentives, Dualism and segmentation, Labour market flexibility, Employee turnover, Migrant labour, State and labour markets, Impact of trade unions on productivity and wages, Minimum wages, Social security, Occupational safety and security, Wages and incomes policy in India, Impact of liberalization and globalisation

S.P. Vichare



References:

Essential Readings

1. Bhattacharya BB and S Sakhivel, Economic Reforms and Jobless Growth in India in the 1990s, The Indian Journal of Labour Economics, Volume 48, No.2, 2005, pp. 243-258
1. Bhagoliwal T.N., Economics of Labour and Industrial Relations, SahityaBhawan, Agra, 1985
2. Bloom Gordon F and Northrup Herbert R, Economics of Labour Relations, Richard D Irwin Inc, Homewood, 1973
3. Cahuc Pierre and Andre Zylberberg, Labor Economics, MIT Press, 2004
4. Government of India, Report of Second National Commission on Labour, 2002
5. Harris-White Barbara and SinhaAnushree, Trade Liberation and India's Informal Economy, Oxford University Press, New Delhi, 2007
6. Sapsford David and ZafirisTzannatos, The Economics of the Labour Market, Macmillan, London, 1993
7. Singh Jwitesh Kumar, Labour Economics, Deep and Deep Publishers, Delhi, 1998
8. UchikawaShuji (eds.), Labour Market and Institutions in India 1990s and Beyond, Manohar Publishers, New Delhi, 2003
9. UnniJeemol and Uma Rani, Employment and Income in the Informal Economy: A Micro Perspective, in RenanaJhabvala, Ratna M Sundaram and JeemolUnni (eds) Informal Economy Centre-stage: New Structures of Employment, Sage Publications, New Delhi, 2003. 26

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Theory of Monetary Institutions

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The course is constructive, that is, will exploit the open foundations of the subject to work through alternative monetary arrangements using microeconomics, and 2. relevant, in that it connects with abiding discussions on the nature of money, the role of banks, the appraisal of central banks, a world central bank, and so on.

Module 1: One-period Trade: (12 Hours)

Market mechanisms: The "bid-offer" market, many monies?, gold and paper money: The loan market, the money rate of interest, a fractional reserve system: modelling trust, Fiat money: modelling bankruptcy, Incomplete markets: commodity money and other structures, money and liquidity: the store of value function

Module 2: Multiperiod Trade: (12 Hours)

Commodity money and credit: "badly distributed" money and credit, fiat money and credit: strategic market games with/without lending, Transactions and the float: financing the float, capital stock, salvage values, Expectations: strategic market games with uncertainty, Money and Transactions Costs: endogenous money, the combinatorics of exchange, brokers and dealers: middlemen, clearinghouses, and setup costs

Module 3: Banking Arrangements: (12 Hours)

An "ideal banking system": a modern loanable funds theory, the bank's portfolio problem equilibrium: from the corn economy to the monetary economy, towards a general equilibrium theory of credit
Narrow Banking: "Deposit Creating Institutions", Free Banking, Universal Banking

Module 4: Central Banks: (12 Hours)

Open-market operations: incentive-compatible contracts, The Lender of Last Resort function: moral hazard, Monetary policy with informal financial markets: dual economy dynamics, Monetary-Fiscal Coordination, Managing Aggregate Risk: systemic fragility and policy, A World Central Bank: The IMF?



References:

Essential Readings

1. Shubik, Martin, The Theory of Money and Financial Institutions, volumes 1 & 2, Cambridge: The MIT Press, 1999
2. Stiglitz, Joseph E. and Bruce E. Greenwald, Towards a New Paradigm in Monetary Economics, Cambridge: The Cambridge University Press, 2003

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Trade Unions and Industrial Relations in India

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course attempts to provide a basic conceptual understanding of the economics of trade unions and industrial relations in India. The syllabus also includes the empirical relevance of theories with suitable examples from a practical industrial relations viewpoint. Such an attempt will be strengthened to enable familiarity with relevant data along with their limitations.

Module 1: Economics of Trade Unions: (9 Hours)

Meaning, Concept, Evolution and Role of Trade Unions. Approaches to the Origin of Trade Unions. Bargaining Theory of Wages, Impact of unions on productivity and wages, Employment Security and Efficiency, Unorganised sector

Module 2: Industrial Relations: (12 Hours)

Definition and scope of industrial relations, Approaches to Industrial Relations: Macro Approaches- System Approach and Class Conflict Approach, Micro Approaches- Taylorism, Fordism and Post-Fordism, Neo-Fordism, Pluralism, Human Relations School and Organisational Behaviour Approach.

Module 3: Industrial Relations in India: (15 Hours)

Trade Unions and Workers: Industrial Sociology of workers in India, History, growth and structure of trade unions, Independent and white collar unions in India. Trade Unions and Contract Workers. Employer's Organisations: Role of managerial class in industrial relations. Industrial conflict: Forms of conflict, strikes, lockouts, absenteeism, employee turnover, causes and consequences of and trends in industrial disputes.

Module 4: Role of the State in Industrial Relations in India: (12 Hours)

Labour Policy in India: Pre and Post-Reform scenario, Impact of Globalisation- Tripartism, Labour Legislation affecting industrial relations: Statutory and Non-Statutory measures to settle industrial disputes. Workers Participation in Management. Voluntary Retirement Schemes, Social Security Measures, Unemployment Insurance. Occupational Safety and Health Management Systems. India and the ILO.

S.P. Vithore



References:

Essential Readings

1. Amin, Ash (Ed.), Post-Fordism-A Reader. Blackwell, Oxford, 1994 (Module 2)
2. Government of India, Ministry of Human Resource Development, Report of Second National Commission on Labour, 2002 (Module 3, 4)
3. Hicks J.R., The Theory of Wages, Clarendon Press, Oxford, 1932 (Module 1)
4. Monappa, Arun, Industrial Relations, Tata McGraw Hill, New Delhi, 2005. (Module 4)
5. Pencavel, John, Labour Markets under Trade Unionism: Employment, Wages and Hours, Basil Blackwell, Cambridge, Massachusetts, 1991 (Module 1)
6. Ramaswamy, E.A. and Uma Ramaswamy, Industry and Labour, Oxford University Press, Bombay 1981 (Module 3)
7. Rees, Albert, The Economics of Trade Unions, University of Chicago Press, Chicago, 1973 (3rd Edition) (Module 1)
8. Roy. J. Adams (eds.), Comparative Industrial Relations, Harper Collins Academic, London, 1991. (Module 2, 4)

S.P. Vichare



Agricultural Development and Policy

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course aims to enhance the students' understanding of agricultural development. Starting from basic questions like what factors lead to agricultural development or why does the share of agriculture in GDP go down once economies start developing, the course tries to enhance the students' awareness on contemporary debates in the literature, and leads them to analysis of current governmental policies and strategies for surviving in the globalizing world. Questions to be asked for the post 1980 period.

Module 1: Theories of Agricultural Development: (12 Hours)

Role of agriculture in a developing economy vis-à-vis a developed economy; Theories of agricultural development (Lewis, Schultz, Mellor, Hayami and Ruttan)

Module 2: Sustainable Agricultural Development and Food Security: (12 Hours)

Impact of green revolution; Models of spread of technology and experiences in input use efficiency; Measurement and strategies for sustainable development; Food security: Concept, measurement, magnitude, and critical evaluation of government policies

Module 3: Competitiveness of Agriculture Products and Marketing: (12 Hours)

Measurement of efficiency of agricultural products in international markets; Efficiency of agricultural markets in India; Form and impact of government intervention in the markets and its effects on efficiency; Commodity markets: operation and likely impacts; Strategies for surviving in a globalizing world

Module 4: History and Policies for Agricultural Development in India: (12 Hours)

Trends in production since 1950; National Food Policy; Agriculture Policy; Area, productivity, employment and wage rate analysis; Trends in India's agricultural exports and imports and implications



References:

Essential Readings

1. BasuKaushik, Analytical Development Economics, Oxford University Press, 1998 (Module1).
2. Bhalla G S., Globalization and Indian Agriculture, Volume 19 of the State of the Indian Farmer Series. Academic Foundation, 2004 (Module 3)
3. Dreze Jean and AmartyaSen, Hunger and Public Action, Oxford University Press, 1989 (Module 2)
4. Lewis Arthur, Economic Development with Unlimited supply of labour, Manchester School of Economics and Social Studies 22: 139-91, 1954 (Module 1)
5. Mellor J and Mudahar M, in Agriculture in Economic Development: Theories, findings and Challenges in Asian context in A Survey of Agricultural Economics Literature, Edited by LeeMartin. University of Minnesota Press, 1992 (Module 1)
6. Norton George and Jeffery Alwang, Introduction to Economics of Agricultural Development, McGraw Hills, New York, 1993 (Module 1)
7. Sawant S D (2002), Indian Agriculture: Past developments and policies for the future, Dantwala Monograph Series, No. 4, 2002 (Module 4)

S. P. Vichore



Banking: Theory and Policy

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The objective of the course is to introduce students to the different aspects of commercial banking theory and policy over 48 lectures. The course would discuss the evolution of different kinds of financial systems, the importance of financial intermediaries and the bank as an important financial intermediary. The course would also deal with issues regarding competition in banking, the need for prudential regulation and would discuss the structure of banking in India along with a focus on the role of banks in aiding financial inclusion and as a support for the microfinance institutions.

Module 1: Introduction: (14 Hours)

Evolution of financial systems (bank oriented and market oriented systems) – Sources and Uses of Funds – need for financial intermediaries – banking in general equilibrium theory

Module 2: Competition in Banking: (10 Hours)

Competition and Networks (unitary and branch banking) – Effect on reputation and risk taking – Competition and Financial Stability

Module 3: Banking Regulation: (12 Hours)

Banking Crises/Bank Panics - Need and Scope for prudential regulation – Micro and Macro prudential indicators – Risk-based regulatory capital – Deposit Insurance – Universal Banking

Module 4: Indian Banking: (12 Hours)

Structure of the banking system – Changes in priority sector lending – Performance of public sector banks in the post reform period – recent developments in banking: electronic banking, relationship banking: collateral lending, SARFESI – Financial Inclusion – Microfinance institutions

J.P. Vichare

References:

Essential Readings

1. Allen, F. and D. Gale, *Comparing Financial Systems*, The MIT Press, Cambridge, Massachusetts, 2001
2. Freixas, X. and J. Rochet, *Microeconomics of Banking*, The MIT Press, Cambridge, Massachusetts, 1999.
3. Berger, A., P. Molyneux and J. Wilson, *The Oxford Handbook of Banking*, Oxford University Press, New York., 2010
4. Ramakrishna, G. and K. Rao, *Performance of Public Sector Banks After Reforms*, Serials Publications, New Delhi, 2008
5. Ghate, P., *Indian Microfinance: The Challenges of Rapid Growth*, Sage, New Delhi, 2007

Additional Readings

1. Hardy D.C. and Pazarbasioglu, C., Leading Indicators of Banking Crises: Was Asia Different? *International Monetary Fund Working Paper*, 1998
2. Polizatto, V.P., Prudential Regulation and Banking Supervision: Building an Institutional Framework for Banks, *World Banking Working Paper* WPS 340, 1990
3. Berger A.N. and G.F. Udell Relationship Lending and Lines of Credit in Small Firm Finance, *Journal of Business*, vol.68, no.3, pp.351-81, 1995
4. Reserve Bank of India Bulletins (various issues).

S.P. Vichare

Environmental Economics

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course is designed to introduce students to key contemporary issues in environmental economics and equip them with the tools and methodologies that are in general applied to analyze environmental problems and policies. An attempt will be made to discuss the currently debated environmental problems and policies in India and other countries.

Module 1: Economic Growth and the Environment: (10 Hours)

Economic Growth and environment, Limits to growth and Sustainable Development, Environmental Kuznets Curve- Environment as an economic and social good/asset, Natural Resources (Exhaustible, renewable, common property resources) - Accounting and Natural Resource Management- Green Accounting

Module 2: Micro foundations of Environmental Economics: (12 Hours)

Types of goods and services - Public, private and common pool resources, externalities and market failure, Social Cost- Benefit- Analysis, Pollution as a Public Bad?, The equi-marginal principle- Economic efficiency versus equity, Damage functions Mitigation and abatement costs, Role of Institutions in environmental protection, Coase Theorem

Module 3: Supplementary Analytical Tools and Environmental Issues: (14 Hours)

Valuation of Natural Resources: Direct and Indirect Methods Environmental impact assessment, Life Cycle Analysis, Pollution- Air, Water and Noise; Regional, National and Supranational dimensions of environmental degradation, Ozone Layer Depletion, Green House Gas Emissions, Global Warming, and Climate Change

Module 4: Environmental Policy and Practices: (12 Hours)

Few approaches to environmental policy: *Command and control - Environmental Standards, Technology Mandates; Market based instruments - Taxes, subsidies, liability instruments tradable permits; Rehabilitation and Resettlement Policy- Kyoto Protocol; Rio debate- Relevant Case Studies and Carbon Trading*



References:

Essential Readings

1. Dixon, J. A., and M. M. Huftschmidt, (ed.) Economic valuation techniques for the environment: A Case Study Workbook. Baltimore: Johns Hopkins University, 1986
2. Field, B.C., Environmental Economics- An Introduction, McGraw-Hill International Edition, Singapore, 1997
3. Hodge, I. Environmental Economics, MacMillan Press Ltd., London, 1995
4. Jeroen C.J.M. van den Bergh, Handbook of Environmental and Resource Economics, Edward Elgar Publishing, 2002
5. Jinhua, Z. and T. Fisher, Notes on Irreversibility, Sustainability and the Limits to Growth, <http://econpapers.repec.org/paper/isugenres/default22.htm>
6. Kolstad, C., Environmental Economics, Oxford University Press, USA, 2006
7. Sankar, U., Policy Instruments For Achieving Low Carbon and High Economic Growth in India (Monograph), National Institute of Public Finance and Policy, New Delhi, 2009
8. United Nations Statistical Division: System of Environmental-Economic Accounts (SEEA) <http://unstats.un.org/unsd/envaccounting/seearev>

S.P. Vichdole



INTERDISCIPLINARY/CROSS STUDIES Semester IV

International Finance

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This elective course, to be offered in the fourth semester, requires a good understanding of Macroeconomics. This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in the context of globalization. A good understanding of International Trade and Trade Policies is desirable.

Module 1: Foreign Exchange Rates and Markets: (12 Hours)

Foreign Exchange Rates: Fixed, Flexible, Nominal, Real and Effective Exchange Rates, Purchasing Power Parity and Interest Parity. Foreign Exchange Markets: Spot, Forward, Futures and Options Currency Markets. Foreign Exchange Risk and Exposure: Exposure, Risk and Parity Relationship, Accounting Exposure versus Real Exposure, Operating Exposure, Hedging Risk and Exposure.

Module 2: Balance of Payments: (12 Hours)

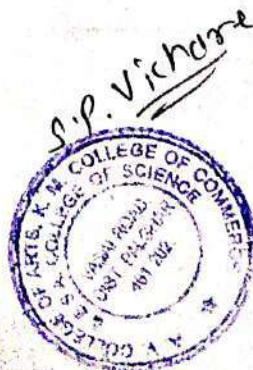
Balance of Payments: Current Account Balance and Capital Account Balance, Official Reserve Transactions, Relationship between Balance of Payments and National Income Accounts. Approaches to Balance of Payments Adjustments: Elasticity, Absorption, Monetary and Portfolio-balance Approaches

Module 3: International Investment and Financing: (12 Hours)

Cash Management: Investment and Borrowing Criterion with Transaction Costs- International Dimensions of Cash Management. Portfolio Investment: International Capital Asset Pricing- Settlement of International Portfolio Investments. Capital Budgeting for Foreign Investments: Project Selection, Cash Flows, Discount Rates, Growth and Concerns about Multinationals. International Financing: Equity Financing, Bond financing, Bank financing

Module 4: International Financial Institutions: (12 Hours)

Gold Standard and Gold Exchange Standard: International Monetary Fund- International Reserves- Special Drawing Rights. Theory of Optimum Currency Areas: International Policy Co-ordination, Currency Board, International Financial and Currency Crisis. International Debt: Measures of Indebtedness-International Debt Crisis 30



References:

Essential Readings

1. Kenen Peter B, The International Economy, Cambridge University Press, New York, 2000 Chapters: 12, 13, 14, 15, 16, 17, 18 and 19 (Modules 2 and 4)
2. Krugman P. R. and Obstfeld M., International Economics-Theory and Policy, Addison-Wesley, Delhi, 2000 Chapters: 12, 15, 16, 20 and 22 (Modules 2 and 4)
3. Levi Maurice D., International Finance, Routledge, New York, 2005 Chapters: 2, 3, 4, And 9 to 18 (Modules 1, 2 and 3)
4. Pilbeam Keith, International Finance, Palgrave, New York, 1998 Chapters: 14 and 15. (Module 4).
5. Salvatore Dominick, International Economics, John Wiley and Sons, Singapore, 2002 Chapter: 14, (Module 1)
6. Sodersten Bo and Reed Geoffrey, International Economics, Macmillan, London, 1994 Chapters: 23, 25, 30 and 31) (Modules 2 and 4)
7. Ugur Mehmet, (edited), An Open Economy Macroeconomics Reader, Routledge, London, 2002 Chapters: 16, 17, 19, 20, 21 and 22 (Modules 2 and 4)

S.P. Vichar



Economics of Human Development

Number of Credits: 6

Pattern of Evaluation: Non-Standard

Preamble: This course on the Economics of Human Development focuses on the widely- accepted global perspective of viewing development as the expansion of people's capabilities, capacities and choices. This people-centric analytical framework for designing and assessing public policy interventions has several implications at macro, meso and micro levels both nationally as well as internationally. This elective has a relatively strong applied component specifically in relation to India that is in-built into each module.

Non-Standard Evaluation Pattern: The evaluation be done through 40 marks of continuous evaluation and a 60 marks end-semester examination. The 40 marks evaluation will consist of a mid-term examination of 20 marks (two questions to be attempted over one hour) and a project of 20 marks on Modules 3 and 4. The project topics will be announced by the 4th teaching week of the semester and the projects should be in by the 10th teaching week. All modules will carry equal weight for the three hour end-semester examination.

Module 1: Concepts of Human Development: (12 Hours)

Growth and Development compared – Perspectives on development – Definition of human development – Basic Needs Approach – Quality of Life Approach – Capability Approach – Human rights – Millennium Development Goals

Module 2: Dimensions of Human Development: (12 Hours)

Empowerment, equity, sustainability, security, productivity and participation – Role of freedoms in promoting human development -- Multi-dimensionality of poverty – Concept of inclusive growth – Role of civil society, NGOs, and people's organizations – Obstacles to inclusive growth – Impact of globalization

Module 3: Measurement: (12 Hours)

Need for indices - GDP – Physical Quality of Life Index (PQLI), Disability Adjusted Life Years (DALY), Social Capability index – Human Development Index – Human Poverty Index – Gender Related Development Index – Gender Empowerment Measure

Module 4: Aspects of Human Development: (12 Hours)

Livelihoods – Inequalities – Gender – Child labour – Aging population – Poverty alleviation - Food Security – Environment – Displacement – Indigenous groups – Migration - Education and Health – Workers and Informal Sector -- Social Security – Human security – Conflict 19

S.P. Vichare



References:

Essential Readings

1. Chelliah Raja J and R. Sudarshan (ed), Income Poverty and Beyond: Human Development In India, UNDP, Social Science Press, New Delhi, 1999
2. Comim F, M. Qizilbash and S. Alkire (eds), The Capability Approach: Concepts, Measures and Applications, Cambridge University Press, Cambridge, 2007
3. Costanza R, B. Low, E. Ostrom and James Wilson (ed), Institutions, Ecosystems and Sustainability, Lewis Publishers, Boca Raton, 2001
4. Dev S. Mahendra, P. Antony, V. Gayathri, and R P Mangain, Social and Economic Security in India, Institute for Human Development, New Delhi, 2001
5. Fukuda-Parr S. and Shiva Kumar A K (ed), Readings in Human Development: Concepts, Measures and Policies for a Development Paradigm, Oxford University Press, New Delhi, 2003
6. Grinspun, A. (ed), Choices for the Poor, Lessons from National Poverty Strategies, UNDP, New York, 2001
7. International Labour Organization, A Fair Globalization: Creating Opportunities for All, World Commission on the Social Dimension of Globalization, Geneva, 2004
8. International Labour Organization: World Employment Reports
9. Meier G M and Stiglitz J E (eds), Frontiers of Development Economics, Oxford University Press, New York, 2001
10. Sen Amartya, Development as Freedom, Oxford University Press, New Delhi, 1999
11. Sen Amartya and Jean Dreze, India: Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1998
12. United Nations Development Programme (UNDP), Human Development Reports 1990-2004, Oxford University Press, New York
13. United Nations Development Programme (UNDP) – India, State Human Development Reports, 2003 – 2006, Oxford University Press, New Delhi.

S.P. Vichare



ABILITY ENHANCEMENT SKILLS Semester IV

Industrial Economics

Number of Credit: 6

Pattern of Evaluation: Standard

Preamble: Ability Enhancement Course, to be offered in the fourth semester, requires a good understanding of both Microeconomics and Macroeconomics. This course aims at providing a theoretical exposition of the behaviour of the firm, market structure and industrial finance with some issues and relevant empirical evidence of Indian industries.

Module 1: Theory of the Firm: (14 Hours)

Firm Competition and Performance: Effects of Monopoly Power- Determinants of Firm Structure- Mergers- Horizontal and Vertical- Conglomerate Integration. Market Structure: Patterns of Market Structure- Determinants of Market Structure- Economies of Scale- Product Differentiation- Capital Requirements. Pricing Strategy in Oligopoly: Theories of Interdependence- Tacit Collusion and Price Leadership- Limit Pricing.

Module 2: Technical Change: (10 Hours)

Market Concentration: Measures of Market Concentration. Advertising: Optimal Advertising- Advertising and Market Structure- Cost of Advertising. Invention and Innovation: Process and Product Innovation- Effects of Innovation on Welfare and Employment- Adoption and Diffusion of Innovation.

Module 3: Financial Analysis: (14 Hours)

Financial Analysis: Funds Flow- Cash Flow Statements- Balance Sheet- Income Statement (Profit and Loss Account)-Ratio Analysis- Multi-Period Compounding- Continuous Compounding. Investment Appraisal: Nature of Investment Decisions- Net Present Value Method- Internal Rate of Return- Discounted Payback Period. Cost of Capital: Determining Components of Cost of Capital- Capital Asset Pricing Model (CAPM)- Weighted Average Cost of Capital (WACC). Capital Structure: Optimum Capital Structure- Modigliani-Miller Hypothesis- CAPM and Capital Structure.

Module 4: Indian Industry: (10 Hours)

Industrial Growth: Trends in Industrial Growth in India-Industrial Location (factors) and Location Policy in India. Small-Scale Industries: Definition-Role-Policy-Issues and Performance. Public Enterprises in India: Performance and Constraints. Competitiveness of Indian Industries: Competition Policy and Foreign Direct Investment. 43

S.P. Vichase



References:

Essential Readings

1. Ahluwalia I. J., Industrial Growth in India- Stagnation since the mid-sixties, Oxford University Press, Delhi, 1985 (Module 4)
2. Hay J and Morris D. J, Industrial Economics- Theory and Evidence, Oxford University Press, (Latest Edition) (Module 2)
3. Koutsoyiannis A., Modern Microeconomics, ELBS/Macmillan, Hong Kong, 1985 (Module 1)
4. Martin Stephen, Industrial Economics- Economic Analysis and Public Policy, Macmillan Publishing Company, New York, 1988/latest edition (Module 1)
5. Mohanty, Binode, (eds.), Economic Development Perspectives, Vol. 3, Public Enterprises and Performance, Common Wealth Publishers, New Delhi, 1991 (Module 4)
6. Mookherjee Dilip (eds.), Indian Industry-Policies and Performance, Oxford University Press, Delhi, 1998 (Module 4)
7. Pandey I M., Financial Management, Vikas Pub. House Pvt. Ltd., New Delhi, 2000 (Module 3)
8. Shepherd W. C., The Economics of Industrial Organization, Prentice Hall, Inc., London, 1985 (Modules 1 and 2)
9. Vepa R. K., Modern Small Industry in India, Sage Publications, 1988 (Module 4)

S.P. Vichare



Demography: Theory and Basic Analysis

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The course is designed to provide an understanding of demographic processes including an in-depth knowledge of linkages between population and economic development. It introduces major developments in demographic concepts by highlighting the sources of demographic data, fertility, mortality, migration and population projection.

Module 1: Population Science, Demography and Economic Development: (10 Hours)

Population and Economic Development, Population and Environment, Implications of Population Growth on Regional Imbalances, Population Science and Demography, Sources of Demographic Data, Malthusian Theory of Population, Theory of Demographic Transition, Age and Sex Composition of Population, Age pyramids, Ageing Population.

Module 2: Nuptiality and Fertility: (14 Hours)

Basic concepts of Nuptiality, Analysis of Marital Status Data, Singulate Mean Age at Marriage: Synthetic Cohort and Decadal Synthetic Cohort Method, Concepts and measurements of Cohort and period fertility, Rele's Method and Reverse survival method in fertility analysis, Bongaart's Proximate Determinants of Fertility, Socio-Economic Determinants of Proximate Variables, Indirect Estimation of Fertility Rates, Davis's Intermediate Variables framework of Fertility, Age Patterns of Fertility.

Module 3: Mortality: (12 Hours)

Basic concepts and analysis of Morbidity, Concepts and Measurements of Mortality. Infant and Child mortality rates, Standardisation of Mortality Rates, Life tables: Concepts, Types, Uses, Methods of construction; Differentials and Determinants of Mortality.

Module 4: Migration and Population Projections: (12 Hours)

Concepts, Patterns and Measures of Migration, Migration Theories and Models (Ravenstein's, Lee's, Wolpert's and Todaro's model), Internal and International Migration, Spatial Distribution and Urbanisation, Importance of Population Projection, Methods of Population projection: Mathematical and components methods.



References:

Essential Readings

1. Bhatt M. (2002): On the Trial of Missing Indian Females, Economic and Political Weekly, 37(51) (52):5105-518, 5244-5263.
2. Bhende AA and T. Kantikar, Principles of Population Studies, Himalaya Publishers, Mumbai, 2000
3. Bogue DJ, EE Arriagas, Douglas L. Anderson, Reading in Population Studies and Methodology, Published for United Nations Population Fund by Social Development Center, Chicago, Illinois, 1993
4. Coale, A.J., 1971, Age Patterns of Marriage, Population Studies, 25(2), pp. 193 –214
5. Henry, S. Shryock, The Methods and Materials of Demography, Vol. 1 and 2, U.S. Department of Commerce, Bureau of Census, Washington D.C. 1971, pp. 283-298 and 549 – 578

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6. International Institute for Population Sciences (IIPS), National Family Health Survey, (NFHS) 1,2,3, Mumbai, 1992-93; 1998-99; 2006-07
7. International Institute for Population Sciences (IIPS), Reproductive and Child Health Survey, Mumbai, 2002-04
8. Lutz, Wolfgang, Distributional Aspects of Human Fertility: A Global Comparative Study, Academic Press, 1989, New York
9. Mishra BD, An Introduction to Demography, South Asian Publishers Pvt. Ltd, New Delhi, 1981
10. Mitra RG, Understanding patterns of Migration from Census 2001 Data, Population, 2002
11. Stabilisation and Development, Council of Cultural Growth and Cultural Relations, Cuttack
12. Preston Samuel, Patrick Heuveline & Michel Guillot, Demography: Measuring and Modelling Population Processes, Blackwell, Cornwall, 2001
13. Sydney HC, Population Theories and Economic Interpretation, Routledge, London, 1968.



Core Courses : Semester - I

Group I i) Microeconomics - I

Credits : 06

UNIT - I: Consumer Behaviour:

Axioms of Rational Choice, Utility function and its existence, revealed preference approach to consumer choice, consumer's optimisation problem, income and substitution effects, indirect utility function and its properties, Roy's identity, Shepherd's lemma and the Slutsky equation

UNIT - 2: Production, Cost and Supply

C-D-L L-R C to L ratio S-R

Production: Returns to Scale and varying proportions, production function (Cobb-Douglas, CES and Tran slog), variations in scale, variations in input proportions, problem of Profit maximization for a firm, Cost: Long run and short run cost curves, cost minimisation, profit function, duality. < Max of profit Min. Cost

UNIT - 3: Price and Output determination under Perfect Competition

Features of perfect competitions, price and output determination in the long and short run, Equilibrium of the firm, and the industry, existence and stability of General Equilibrium in a pure consumption economy, First and Second Fundamental Theorems of Welfare Economics, welfare effects of price changes, Market failures and the theory of the Second best

UNIT - 4: Monopoly:

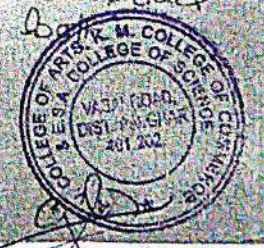
Monopoly : Its features, Measures market power, price and output determination in a monopoly, the welfare effects of monopoly, first, second and third degree price determination under monopoly, natural monopoly, regulation of monopolies

References:

1. Gravelled H. and Rees R. (2004) : Microeconomics., 3rd Edition, Pearson Edition Ltd, New Delhi.
2. Varian H (2000): Intermediate Microeconomics: A Modern Approach, 8th Edition, W. W. Norton and Company

Teach from Varian
The areas not covered by Varian can be taken from Gravelled & Rees
Varian is least in maths
Base Book

Free Download
For book



Group I ii) Macroeconomics -

Module 1. Macroeconomic Accounting Stocks and Flows; Output and Income; Income and Expenditure; Saving and Investment; Real and Nominal Income; The open economy

Module 2. Determination of National Income and the Price Level (12 Sessions) Keynesian Model: IS-LM Analysis, Fiscal and Monetary Policy, The role of expectations The AS-AD Model; Inflation and Unemployment

Module 3. The Open Economy Definitions and Concepts: The trade balance, Balance Payments, Capital Mobility, Automatic adjustment, the classical approach Fixed Exchange Rates: The IS-LM-BP model, Monetary and Fiscal Policy Flexible Exchange Rates: The IS-LM-BP model, Monetary and Fiscal Policy ✓

Module 4. Micro foundations of Macroeconomics Consumption: Consumption smoothing, temporary and permanent shocks, Investment: The optimal capital stock irreversibility and investment, The demand for money: Money, bonds, and private wealth financial assets Seigniorage: The optimal level of seigniorage

Book Texts

- 1. Carlin, Wendy and David Soskice, 2007, *Macroeconomics*, Oxford University Press
- 2. D'Souza, Errol, *Macroeconomics*, 2012, Dorling Kindersley (India) Pvt Ltd
- 3. Michel, Thomas, 2009, *Macroeconomic Theory*, PHI Learning

Group I iii) Statistical Methods in Economics

Credit : 06

UNIT 1: Random variables 'mean and variance of a random variable, basic laws of probability, Discrete random variables (Geometric, Binomial and Poisson), Continuous distributions (The Normal Distribution), Covariance and Correlation (Pearson's and Spearman's coefficients), the Law of Large numbers (without proof)

UNIT 2: Tests of Hypothesis: Tests of hypothesis, null and alternative hypothesis, one tailed and two tailed tests, The standard normal distribution and its applications, the Chi-square distribution and its applications, the t distribution and its application, the F distribution and its application, the Central Limit Theorem (without proof)

UNIT 3: Simple linear regression: Estimation and hypothesis testing, properties of estimators, R square and adjusted R square, the F test in regression, interpreting regression coefficients.

UNIT 4: Problems in simple Linear Regression model: Heteroskedasticity and its consequences, autocorrelation and its consequences, multicollinearity and its consequences.

References:

- 1. Hatakhar Neeraj R: Principles of Econometrics : an Introduction Using R publications, 2010
- 2. Kennedy P.: A Guide to Econometrics, sixth edition" Wiley Blackwell 2008



Group I iv) Economics of Development -4

Credit: 06

UNIT 1: Concepts and measures of Growth and Developments in economic thought – History, expectations and development - Economic growth and structural change – Capabilities, entitlements and deprivation - Inequality and growth – Measurement of Inequality and poverty- Measurement of development - HDI, GDI, etc.- Role of market and state

UNIT 2: Modern theories of Growth and Distribution Harrod - Domar Model of growth- Solow model of growth- Approaches to technical change – Convergence – Endogenous growth models of Romer and Lucas-Human capital *Conditional & Un*

UNIT 3: Microeconomics of Development Segmentation of rural land, labour, capital and credit markets –microfinance- Market inter-linkages – land markets-labour markets and households–~~Credit market-microfinance~~- The household model of fertility decisions- Institutions and development

UNIT 4: Macroeconomics of Development Environment and development- Development and the constraint of natural resources -Environmental problems in Economic Development—Environment and Sustainable Development-Trade and Development – Trade and foreign exchange –Role of international financial and trade institutions – Structural adjustment and stabilization

References :

1. Basu, Kaushik(1998), *Analytical Development Economics*, OUP, New Delhi. *See U-4*
2. Ray, Debraj (2004), *Development Economics*, OUP, New Delhi.



Semester II i) Public Economics

Module 1: Government in a Market Economy:

Credits : 01

Theorems of Welfare Economics: Implications, Lump Sum Taxes and Transfers
Rationale for State Intervention: Market Failures and Externalities, Tax and Regulatory
Distribution, Social Choice, Voting Rules, Arrow Impossibility Theorem

Module 2: Public Expenditure: Rationale and Evaluation: (12 Hours)

Public Goods: Pure and Local, Optimal provision, Lindahl's Voluntary Exchange
Approach, Preference Revelation mechanism, Private provision of Public Goods, Merit
Goods, Club Goods Evaluation of Government Expenditure: Elements of Cost-Benefit
analysis

For models

Module 3: Taxation: (14 Hours)

Basic Concepts of Tax Theory: Direct vs. Indirect Taxes, Ability to Pay
Horizontal and Vertical Equity. Commodity Taxation: Tax Rules, Optimal Commodity
Taxation, Public Sector Pricing Income Taxation: Equity and Efficiency, Taxation and
Labour Supply, Optimal Income Taxation (linear and non-linear). Tax Evasion: Basic
Model, Auditing and Punishment.

Module 4: Reforms and Government: (10 Hours)

Fiscal Rules: Rationale, International and Indian Experience, Decentralisation
Decentralisation Theorem. India's Federal Structure: Taxation powers, Expenditure
responsibilities, Intergovernmental transfers, VAT, GST

References

1. Atkinson A.B. and J. E. Stiglitz: Lectures on Public Economics, New York: McGraw-Hill, 1980
2. Cullis J. and P. Jones: Public Finance and Public Choice, OUP, 1998
3. Hindriks J. and Gareth D. Myles: Intermediate Public Economics, MIT Press, 2006.
4. Myles G.: Public Economics, Cambridge University Press, 1995
5. Oates W.: Fiscal Federalism, Harcourt, Brace Jovanovich, 1972
6. Purohit M.: Value Added Tax, Gayatri Publications
7. Tresch R.: Public Finance: A Normative Theory, Academic Press, 1995

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Semester II ii) Mathematical Techniques for Economists

Credits : 06

UNIT 1: A set and its elements, basic set theoretic operations, De Morgan's Laws. slope and intercept of a straight line, higher order functions, logarithmic and exponential functions, rules of logarithms and exponentiation, limits of sequences

UNIT 2: Derivative of a function, addition, multiplication and Chain rule, application of derivatives in Economics, Unconstrained optimisation, in Economics, partial derivatives and their applications in Economics, introduction to integration and its applications in Economics

UNIT 3: Constrained optimisation in Economics, Lagrange multipliers and equality constraints, constrained optimisation with inequality constraints, applications in Economics

UNIT 4: Introduction to Matrices, adding and multiplying matrices, transpose and inverse of a matrix, solving simultaneous equations with matrices

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Semester II iii) Microeconomics - II

Credits 06

UNIT 1: Introduction to Game Theory, normal form games and extensive form games, dominant strategy equilibrium, Prisoner's dilemma, Nash Equilibrium in Pure and Mixed strategies, sub game perfection, Uncertainty and Choice under uncertainty, Certainty Equivalence. measures of Risk Aversion. ^{Loving -} ^{AVersion -} ^{Neutral -} ^{Confess + not} ^{Card}

UNIT 2: Oligopoly and its features, Cournot Model, Bertrand Model, back ward induction and Stackelberg model, comparison with monopoly, oligopoly in repeated games and tacit collusion, limit pricing and entry deterrence in monopoly.

UNIT 3: Moral hazard and adverse selection, market for lemons, Principle-agent models, optimal contracts under symmetric information, contracts under asymmetric information, screening and signalling, applications.

UNIT 4: Alternative Theories of the Firm, Morris model of managerial enterprise, Williamson's model of managerial discretion, behavioural theories of the firm, Full cost pricing principle, existence, purpose and boundaries of firms, transactions costs, resource based, knowledge based and transaction based theories of the firm

References

1. Gravelled H. and Rees R. (2004) : Microeconomics., 3rd Edition, Pearson Edition Ltd, New Delhi.
2. Varian H (2000): Intermediate Microeconomics: A Modern Approach, 8th Edition, W. W. Norton and Company
3. Gibbons R. A Primer in Game Theory, Harvester-Wheat sheaf, 1992

Unit 2



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Semester II iv) Macro Economics - II

1268

UNIT 1. Imperfectly flexible prices, Price-setting under imperfect competition, Menu costs, real rigidity and neutrality, Quadratic price adjustments

✓ 278 ✓

✓ 84-94

UNIT 2: New Classical Economics, the DSGE model, Wealth Effects and the Government Budget Constraint; money/bond finance, The government budget deficit; Ricardian Equivalence

356 ✓ 419 ✓

UNIT 3: New Keynesian Economics, Disequilibrium, multiple equilibrium, hysteresis Reconstructing the Keynesian multiplier, The NK model of inflation

UNIT 4. Macroeconomic Policy, Rules versus Discretion, Credibility & Reputation, Dynamic Inconsistency Banks, Financial Intermediaries and Unconventional Monetary Policy Inflation Targeting and Exchange Rates

359-376

References

1. Heijdra, Ben J. and Frederick Van Der Ploeg, 2002, *Foundations of Modern Macroeconomics*, Oxford University Press, Oxford
2. Romer, David, 2012, *Advanced Macroeconomics*, McGraw-Hill, Fourth Edition
3. Wickens, Michael, 2011, *Macroeconomic Theory and the Dynamic General Equilibrium Approach*, Princeton University Press

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 12/11/16 --- Macro Eco
 21/10/16 --- Adv. Econ Analysis
 29/11/16 --- International Trade & com. Policy

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UNIVERSITY OF MUMBAI

No. UG/46 of 2017-18

CIRCULAR:-

A reference is invited to the syllabi relating to the Master of Arts (M.A.) Programme vide this office Circular No.UG/75 of 2012-13, dated 17th October, 2012 and The Head, University Department of Economics and the Principals of the affiliated Colleges in Arts are hereby informed that the recommendation made by the Board of Studies in Economics at its meeting held on 22nd April, 2017 has been accepted by the Academic Council at its meeting held on 11th May, 2017 vide item No.4.83 and that in accordance therewith, the revised syllabus as per the (CBCS) of M.A. Economics (Sem III & IV), which is available on the University's web site (www.mu.ac.in) and that the same has been brought into force with effect from the academic year 2017-18.

MUMBAI - 400 032

15th July, 2017

To


(Dr.M.A.Khan)
REGISTRAR

The Head, University Department of Economics and the Principals of the affiliated Colleges in Arts

A.C/4.83/11/05/2017

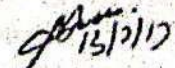
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MUMBAI-400 032

15th July, 2017

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- 1) The Co-ordinator, Faculty of Arts,
- 2) The Offg. Director, Board of Examinations and Evaluation,
- 3) The Director of Board of Student Development,
- 4) The Professor-cum-Director, Institute of Distance and Open Learning (IDOL),
- 5) The Co-Ordinator, University Computerization Centre,


(Dr.M.A.Khan)
REGISTRAR

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Appendix A

UNIVERSITY OF MUMBAI



Revised Syllabus for the M.A.

Program: M.A.

Course: Economics

Semester III & IV

(As per Choice Based Credit System with effect
from the Academic Year 2017-2018)



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ELECTIVES - SEMESTER III

International Trade: Theory and Policy

Number of Credits : 6

Pattern of Evaluation: Standard

Preamble: This elective course, to be offered in the third semester, requires a good understanding of Microeconomics. The course aims at providing a theoretical exposition of bases, effects and the restrictions on free flow of international trade with the empirical evidence.

Module 1: Classical Trade Theory: (10 Hours)

Absolute and Comparative Advantage of Trade; Real and Opportunity Cost Approaches; Gains from Trade, Reciprocal Demand and Offer Curves; Terms of Trade. Revealed Comparative Advantage

Module 2: Neo-Classical Trade Theory: (14 Hours)

The Heckscher-Ohlin (H-O) Theory; Factor Price Equalization Theorem and Generalization to n Factors and Goods; Leontief Paradox, Rybczynski Theorem; Trade and Growth

Module 3: Modern Trade Theory: (12 Hours)

Concept of Intra-industry Trade, Imperfect Competition and Trade- The Neo-Heckscher-Ohlin Models- Favley Model, Neo-Chamberlinian Models- Krugman Model, Oligopolistic Models- Brander-Krugman Model, Reciprocal Dumping Model- Iceberg Model. Trade in Services

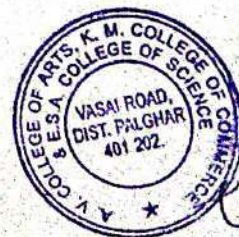
Module 4: Trade Policy: (12 Hours).

Instruments of Trade Policy; Tariffs and Welfare, Optimum Tariff, Tariff and Real Rewards to Factors of Production, The Stolper-Samuelson Theorem, Metzler's Paradox, Theory of Customs Union, Quotas and Export Subsidies. Gains from Trade and Regional Agreements

References:

Essential Readings

1. Feenstra R. C., Advanced International Trade- Theory and Evidence, Princeton University Press, Princeton, 2004 (Modules 2, 3 and 4)
2. Grimwade Nigel, International Trade, (Second Edition), Routledge, London, 2001 (Modules 3 and 4).
3. Grubel H. G. and P. J. Lloyd, Intra-industry Trade, Macmillan, London, 1975 (Module 3)
4. Haberler G., A Survey of International Trade Theory, International Finance Section, Department of Economics, Princeton University, 1961 (Module 1)
5. Krugman P. R. and M. Obstfeld, International Economics-Theory and Policy, Addison-Wesley, Delhi, 2000 (Modules 2 and 3)
6. Salvatore D., International Economics, John Wiley and Sons, Singapore, 2002 (All Modules)
7. Södersten Bo and R. Geoffrey, International Economics, Macmillan, London, 1994 (Modules 2, 3 and 4)



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Agricultural Development and Policy

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course aims to enhance the students' understanding of agricultural development. Starting from basic questions like what factors lead to agricultural development or why does the share of agriculture in GDP go down once economies start developing, the course tries to enhance the students' awareness on contemporary debates in the literature, and leads them to analysis of current governmental policies and strategies for surviving in the globalizing world. Questions to be asked for the post 1980 period.

Module 1: Theories of Agricultural Development: (12 Hours)

Role of agriculture in a developing economy vis-à-vis a developed economy; Theories of agricultural development (Lewis, Schultz, Mellor, Hayami and Ruttan)

Module 2: Sustainable Agricultural Development and Food Security: (12 Hours)

Impact of green revolution; Models of spread of technology and experiences in input use efficiency; Measurement and strategies for sustainable development; Food security: Concept, measurement, magnitude, and critical evaluation of government policies

Module 3: Competitiveness of Agriculture Products and Marketing: (12 Hours)

Measurement of efficiency of agricultural products in international markets; Efficiency of agricultural markets in India; Form and impact of government intervention in the markets and its effects on efficiency; Commodity markets: operation and likely impacts; Strategies for surviving in a globalizing world

Module 4: History and Policies for Agricultural Development in India: (12 Hours)

Trends in production since 1950; National Food Policy; Agriculture Policy; Area, productivity, employment and wage rate analysis; Trends in India's agricultural exports and imports and implications



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References:

Essential Readings

1. BasuKaushik, Analytical Development Economics, Oxford University Press, 1998 (Module1).
2. Bhalla G S., Globalization and Indian Agriculture, Volume 19 of the State of the Indian Farmer Series. Academic Foundation, 2004 (Module 3)
3. Dreze Jean and AmartyaSen, Hunger and Public Action, Oxford University Press, 1989 (Module 2)
4. Lewis Arthur, Economic Development with Unlimited supply of labour, Manchester School of Economics and Social Studies 22: 139-91, 1954 (Module 1)
5. Mellor J and Mudahar M, in Agriculture in Economic Development: Theories, findings and Challenges in Asian context in A Survey of Agricultural Economics Literature, Edited by Lee Martin. University of Minnesota Press, 1992 (Module 1)
6. Norton George and Jeffery Alwang, Introduction to Economics of Agricultural Development, McGraw Hills, New York, 1993 (Module 1)
7. Sawant S D (2002), Indian Agriculture: Past developments and policies for the future, Dantwala Monograph Series, No. 4, 2002 (Module 4)



Economics of Labour Markets

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: Labour market issues are important for students of Micro, Macro, and Industrial Economics. The course sheds light on a range of new developments and a host of issues studied by generations of labour market experts. It captures the interplay of various factors in the labour market by describing demand/supply aspects, wages, employment, unemployment, the cost of labour, workers' participation and impact of new labour policies in the labour market. The course will be offered in the third semester.

Module 1: Nature of the Labour Market: (10 Hours)

Concept of labour market, Characteristics, Types, Search in labour markets, The theory of Human Capital, Investment in Human Capital, Costs and life-time benefits to education

Module 2: Approaches in Labour Markets: (12 Hours)

The theory of labour demand; time period and types of markets, Industry demand for labour, Determinants of labour demand, The theory of supply, Work-leisure choice in indifference curves, Budget constraints, Utility maximization, Backward-bending labour supply curve and its applications,

Module 3: Wage Issues in Labour Markets: (14 Hours)

Theories of Wages, Wages in different markets, Wage structure and components of wages, Share of wages, Distribution and Inequality of wage income, Male-female wage differentials, Inter-Sectoral wage differentials, Contract labour, Properties of contractual wages, Labour market rigidities and flexibilities, Wage and output relations in India during pre- and post-reform period

Module 4: Labour Markets in India: (12 Hours)

Linkages in labour markets, role of risk, Information and incentives, Dualism and segmentation, Labour market flexibility, Employee turnover, Migrant labour, State and labour markets, Impact of trade unions on productivity and wages, Minimum wages, Social security, Occupational safety and security, Wages and incomes policy in India, Impact of liberalization and globalisation



References:

Essential Readings

1. Bhattacharya BB and S Sakthivel, Economic Reforms and Jobless Growth in India in the 1990s, The Indian Journal of Labour Economics, Volume 48, No.2, 2005, pp. 243-258
1. Bhagoliwal T.N., Economics of Labour and Industrial Relations, SahityaBhawan, Agra, 1985
2. Bloom Gordon F and Northrup Herbert R, Economics of Labour Relations, Richard D Irwin Inc, Homewood, 1973
3. Cahuc Pierre and Andre Zylberberg, Labor Economics, MIT Press, 2004
4. Government of India, Report of Second National Commission on Labour, 2002
5. Harris-White Barbara and SinhaAnushree, Trade Liberation and India's Informal Economy, Oxford University Press, New Delhi, 2007
6. Sapsford David and ZafirisTzannatos, The Economics of the Labour Market, Macmillan, London, 1993
7. Singh Jwitesh Kumar, Labour Economics, Deep and Deep Publishers, Delhi, 1998
8. UchikawaShuji (eds.), Labour Market and Institutions in India 1990s and Beyond, Manohar Publishers, New Delhi, 2003
9. UnniJeemol and Uma Rani, Employment and Income in the Informal Economy: A Micro Perspective, in RenanaJhabvala, Ratna M Sundaram and JeemolUnni (eds) Informal Economy Centre-stage: New Structures of Employment, Sage Publications, New Delhi, 2003. 26



Banking: Theory and Policy

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The objective of the course is to introduce students to the different aspects of commercial banking theory and policy over 48 lectures. The course would discuss the evolution of different kinds of financial systems, the importance of financial intermediaries and the bank as an important financial intermediary. The course would also deal with issues regarding competition in banking, the need for prudential regulation and would discuss the structure of banking in India along with a focus on the role of banks in aiding financial inclusion and as a support for the microfinance institutions.

Module 1: Introduction: (14 Hours)

Evolution of financial systems (bank oriented and market oriented systems) – Sources and Uses of Funds – need for financial intermediaries – banking in general equilibrium theory

Module 2: Competition in Banking: (10 Hours)

Competition and Networks (unitary and branch banking) – Effect on reputation and risk taking – Competition and Financial Stability

Module 3: Banking Regulation: (12 Hours)

Banking Crises/Bank Panics - Need and Scope for prudential regulation – Micro and Macro prudential indicators – Risk-based regulatory capital – Deposit Insurance – Universal Banking

Module 4: Indian Banking: (12 Hours)

Structure of the banking system – Changes in priority sector lending – Performance of public sector banks in the post reform period – recent developments in banking: electronic banking, relationship banking: collateral lending, SARFESI – Financial Inclusion – Microfinance institutions



References:

Essential Readings

1. Allen, F. and D. Gale, *Comparing Financial Systems*, The MIT Press, Cambridge, Massachusetts, 2001
2. Freixas, X. and J. Rochet, *Microeconomics of Banking*, The MIT Press, Cambridge, Massachusetts, 1999.
3. Berger, A., P. Molyneux and J. Wilson, *The Oxford Handbook of Banking*, Oxford University Press, New York., 2010
4. Ramakrishna, G. and K. Rao, *Performance of Public Sector Banks After Reforms*, Serials Publications, New Delhi, 2008
5. Ghate, P., *Indian Microfinance: The Challenges of Rapid Growth*, Sage, New Delhi, 2007

Additional Readings

1. Hardy D.C. and Pazarbasioglu, C., Leading Indicators of Banking Crises: Was Asia Different? *International Monetary Fund Working Paper*, 1998
2. Polizatto, V.P., Prudential Regulation and Banking Supervision: Building an Institutional Framework for Banks, *World Banking Working Paper WPS 340*, 1990
3. Berger A.N. and G.F. Udell Relationship Lending and Lines of Credit in Small Firm Finance, *Journal of Business*, vol.68, no.3, pp.351-81, 1995
4. Reserve Bank of India Bulletins (various issues).



Environmental Economics

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This course is designed to introduce students to key contemporary issues in environmental economics and equip them with the tools and methodologies that are in general applied to analyze environmental problems and policies. An attempt will be made to discuss the currently debated environmental problems and policies in India and other countries.

Module 1: Economic Growth and the Environment: (10 Hours)

Economic Growth and environment, Limits to growth and Sustainable Development, Environmental Kuznets Curve- Environment as an economic and social good/asset, Natural Resources (Exhaustible, renewable, common property resources) - Accounting and Natural Resource Management- Green Accounting

Module 2: Micro foundations of Environmental Economics: (12 Hours)

Types of goods and services - Public, private and common pool resources, externalities and market failure, Social Cost- Benefit- Analysis, Pollution as a Public Bad?, The equi-marginal principle- Economic efficiency versus equity, Damage functions Mitigation and abatement costs, Role of Institutions in environmental protection, Coase Theorem

Module 3: Supplementary Analytical Tools and Environmental Issues: (14 Hours)

Valuation of Natural Resources: Direct and Indirect Methods Environmental impact assessment, Life Cycle Analysis, Pollution- Air, Water and Noise; Regional, National and Supranational dimensions of environmental degradation, Ozone Layer Depletion, Green House Gas Emissions, Global Warming, and Climate Change

Module 4: Environmental Policy and Practices: (12 Hours)

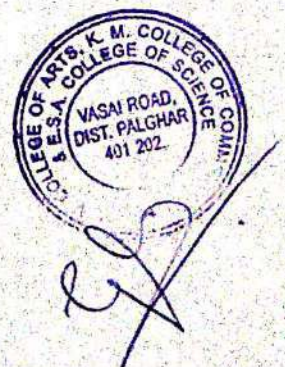
Few approaches to environmental policy: *Command and control - Environmental Standards, Technology Mandates; Market based instruments - Taxes, subsidies, liability instruments tradable permits;* Rehabilitation and Resettlement Policy- Kyoto Protocol; Rio debate- Relevant Case Studies and Carbon Trading



References:

Essential Readings

1. Dixon, J. A., and M. M. Hufschmidt, (ed.) Economic valuation techniques for the environment: A Case Study Workbook. Baltimore: Johns Hopkins University, 1986
2. Field, B.C., Environmental Economics- An Introduction, McGraw-Hill International Edition, Singapore, 1997
3. Hodge, I. Environmental Economics, MacMillan Press Ltd., London, 1995
4. Jeroen C.J.M. van den Bergh, Handbook of Environmental and Resource Economics, Edward Elgar Publishing, 2002
5. Jinhua, Z. and T. Fisher, Notes on Irreversibility, Sustainability and the Limits to Growth, <http://econpapers.repec.org/paper/isugenres/default22.htm>
6. Kolstad, C., Environmental Economics, Oxford University Press, USA, 2006
7. Sankar, U., Policy Instruments For Achieving Low Carbon and High Economic Growth in India (Monograph), National Institute of Public Finance and Policy, New Delhi, 2009
8. United Nations Statistical Division: System of Environmental-Economic Accounts (SEEA) <http://unstats.un.org/unsd/envaccounting/seearev>



INTERDISCIPLINARY/CROSS STUDIES Semester IV

International Finance

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: This elective course, to be offered in the fourth semester, requires a good understanding of Macroeconomics. This course aims at providing a theoretical exposition of different aspects of international finance and financial institutions in the context of globalization. A good understanding of International Trade and Trade Policies is desirable.

Module 1: Foreign Exchange Rates and Markets: (12 Hours)

Foreign Exchange Rates: Fixed, Flexible, Nominal, Real and Effective Exchange Rates, Purchasing Power Parity and Interest Parity. Foreign Exchange Markets: Spot, Forward, Futures and Options Currency Markets. Foreign Exchange Risk and Exposure: Exposure, Risk and Parity Relationship, Accounting Exposure versus Real Exposure, Operating Exposure, Hedging Risk and Exposure.

Module 2: Balance of Payments: (12 Hours)

Balance of Payments: Current Account Balance and Capital Account Balance, Official Reserve Transactions, Relationship between Balance of Payments and National Income Accounts. Approaches to Balance of Payments Adjustments: Elasticity, Absorption, Monetary and Portfolio-balance Approaches

Module 3: International Investment and Financing: (12 Hours)

Cash Management: Investment and Borrowing Criterion with Transaction Costs- International Dimensions of Cash Management. Portfolio Investment: International Capital Asset Pricing- Settlement of International Portfolio Investments. Capital Budgeting for Foreign Investments: Project Selection, Cash Flows, Discount Rates, Growth and Concerns about Multinationals. International Financing: Equity Financing, Bond financing, Bank financing

Module 4: International Financial Institutions: (12 Hours)

Gold Standard and Gold Exchange Standard: International Monetary Fund- International Reserves- Special Drawing Rights. Theory of Optimum Currency Areas: International Policy Co-ordination, Currency Board, International Financial and Currency Crisis. International Debt: Measures of Indebtedness-International Debt Crisis 30



References:

Essential Readings

1. Kenen Peter B, The International Economy, Cambridge University Press, New York, 2000 Chapters: 12, 13, 14, 15, 16, 17, 18 and 19 (Modules 2 and 4)
2. Krugman P. R. and Obstfeld M., International Economics-Theory and Policy, Addison-Wesley, Delhi, 2000 Chapters: 12, 15, 16, 20 and 22 (Modules 2 and 4)
3. Levi Maurice D., International Finance, Routledge, New York, 2005 Chapters: 2, 3, 4, And 9 to 18 (Modules 1, 2 and 3)
4. Pilbeam Keith, International Finance, Palgrave, New York, 1998 Chapters: 14 and 15. (Module 4).
5. Salvatore Dominick, International Economics, John Wiley and Sons, Singapore, 2002 Chapter: 14, (Module 1)
6. Sodersten Bo and Reed Geoffrey, International Economics, Macmillan, London, 1994 Chapters: 23, 25, 30 and 31) (Modules 2 and 4)
7. Ugur Mehmet, (edited), An Open Economy Macroeconomics Reader, Routledge, London, 2002 Chapters: 16, 17, 19, 20, 21 and 22 (Modules 2 and 4)



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Demography: Theory and Basic Analysis

Number of Credits: 6

Pattern of Evaluation: Standard

Preamble: The course is designed to provide an understanding of demographic processes including an in-depth knowledge of linkages between population and economic development. It introduces major developments in demographic concepts by highlighting the sources of demographic data, fertility, mortality, migration and population projection.

Module 1: Population Science, Demography and Economic Development: (10 Hours)

Population and Economic Development, Population and Environment, Implications of Population Growth on Regional Imbalances, Population Science and Demography, Sources of Demographic Data, Malthusian Theory of Population, Theory of Demographic Transition, Age and Sex Composition of Population, Age pyramids, Ageing Population.

Module 2: Nuptiality and Fertility: (14 Hours)

Basic concepts of Nuptiality, Analysis of Marital Status Data, Singulate Mean Age at Marriage: Synthetic Cohort and Decadal Synthetic Cohort Method, Concepts and measurements of Cohort and period fertility, Rele's Method and Reverse survival method in fertility analysis, Bongaart's Proximate Determinants of Fertility, Socio-Economic Determinants of Proximate Variables, Indirect Estimation of Fertility Rates, Davis's Intermediate Variables framework of Fertility, Age Patterns of Fertility.

Module 3: Mortality: (12 Hours)

Basic concepts and analysis of Morbidity, Concepts and Measurements of Mortality, Infant and Child mortality rates, Standardisation of Mortality Rates, Life tables: Concepts, Types, Uses, Methods of construction; Differentials and Determinants of Mortality.

Module 4: Migration and Population Projections: (12 Hours)

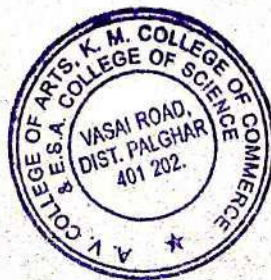
Concepts, Patterns and Measures of Migration, Migration Theories and Models (Ravenstein's, Lee's, Wolpert's and Todaro's model), Internal and International Migration, Spatial Distribution and Urbanisation, Importance of Population Projection, Methods of Population projection: Mathematical and components methods.



References:

Essential Readings

1. Bhatt M. (2002): On the Trial of Missing Indian Females, Economic and Political Weekly, 37(51) (52):5105-518, 5244-5263.
2. Bhende AA and T. Kantikar, Principles of Population Studies, Himalaya Publishers, Mumbai, 2000
3. Bogue DJ, EE Arriagas, Douglas L. Anderson, Reading in Population Studies and Methodology, Published for United Nations Population Fund by Social Development Center, Chicago, Illinois, 1993
4. Coale, A.J., 1971, Age Patterns of Marriage, Population Studies, 25(2), pp. 193 – 214
5. Henry, S. Shryock, The Methods and Materials of Demography, Vol. 1 and 2, U.S. Department of Commerce, Bureau of Census, Washington D.C. 1971, pp. 283-298 and 549 – 578



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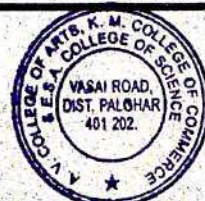
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**Master of Commerce (M.Com)
Programme
Two Year Integrated Programme -
Four Semesters
*Course Structure***

**Under Choice Based Credit, Grading and
Semester System**

To be implemented from Academic Year- 2016-2017
Progressively

Faculty of Commerce, University of Mumbai



Master of Commerce (M.Com) Programme

Under Choice Based Credit, Grading and Semester System

Course Structure

M.Com I

(To be implemented from Academic Year- 2016-2017)

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
1	Core Courses (CC)		1	Core Courses (CC)	
1	Strategic Management	06	1	Research Methodology for Business	06
2	Economics for Business Decisions	06	2	Macro Economics concepts and Applications	06
3	Cost and Management Accounting	06	3	Corporate Finance	06
4	Business Ethics and Corporate Social Responsibility	06	4	E-Commerce	06
Total Credits		24	Total Credits		24

M.Com II

(To be implemented from Academic Year- 2017-2018)

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
1	Elective Courses (EC)		1	Elective Courses (EC)	
1,2 and 3	*Any one group of courses from the following list of the courses (Group – A/B/C/D/E)	18	1,2 and 3	**Any one group of courses from the following list of the courses (Group – A/B/C/D/E)	18
2	✓ Project Work		2	✓ Project Work	
4	Project Work - I	06	4	Project Work - II	06
Total Credits		24	Total Credits		24

✓ **Note:** Project work is considered as a special course involving application of knowledge in solving/ analyzing/ exploring a real life situation/ difficult problem. Project work would be of 06 credits. A project work may be undertaken in any area of Elective Courses



1	<i>*List of group of Elective Courses (EC) for Semester III (Any Three out of Five)</i>		1	<i>** List of group of Elective Courses (EC) for Semester IV (Any Three out of Five)</i>	
Group A: Advanced Accounting, Corporate Accounting and Financial Management					
1	Advanced Financial Accounting	06	1	Advanced Auditing	06
2	Corporate Financial Accounting	06	2	Indirect Tax	06
3	(Skill based) : Financial Management	06	3	International Financial Reporting Standards	06
4	Direct Tax	06	4	Personal Financial Planning	06
5	Financial Services	06	5	Financial Journalism	06
Group B: Business Studies (Management)					
1	Human Resource Management	06	1	Supply chain management and logistics	06
2	Rural Marketing	06	2	Advertising and sales Management	06
3	Entrepreneurial Management	06	3	Retail Management	06
4	Marketing Strategies and practices	06	4	Tourism Management	06
5	Organizational Behaviour	06	5	Management of Business Relations	06
Group C : Banking & Finance					
1	Banking Law and Practices	06	1	Cooperative Banking System	06
2	(Skill based) Legal framework of banking	06	2	Financial Institutions and Markets	06
3	Commercial Bank Management	06	3	Accounting and Auditing of Banking	06
4	Investment Management Analysis	06	4	International Finance	06
5	Financial Risk Management	06	5	Financial Services	06
Group D : E-Commerce					
1	Database Management System	06	1	E-Commerce Security and Law	06
2	Internet & Web-Designing (skill based)	06	2	Advance technology for E-Commerce	06
3	Network Infrastructure and Payment System	06	3	Management Information System	06
4	Logistic & supply chain Management in E-Commerce	06	4	Digital Marketing	06
5	Business Models in E-Commerce & ICT Applications	06	5	International Business, Law and Taxation.	06



1 *List of group of Elective Courses (EC) for Semester III (Any Three out of Five)			1 ** List of group of Elective Courses (EC) for Semester IV (Any Three out of Five)		
Group E: Business Economics					
1	Economics of Growth and Development	06	1	Urban Economics	06
2	Applied Econometrics	06	2	Entrepreneurship and family business	06
3	Agriculture Economics	06	3	Indian Financial system	06
4	Monetary Economics	06	4	International Economics	06
5	Industrial Economics	06	5	Economics of Services	06

Note: Group selected in Semester III will continue in Semester IV



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University of Mumbai



**Revised Syllabus
and
Question Paper Pattern
of Courses
of
Master of Commerce (M.Com)
Programme
at
Two Year
*Semester I and II***

**Under Choice Based Credit, Grading and
Semester System**

(To be implemented from Academic Year- 2016-2017)

Faculty of Commerce, University of Mumbai



Master of Commerce (M.Com) Programme
Under Choice Based Credit, Grading and Semester System
Course Structure

M.Com I

(To be implemented from Academic Year- 2016-2017)

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
1	<i>Core Courses (CC)</i>		1	<i>Core Courses (CC)</i>	
1	Strategic Management	06	1	Research Methodology for Business	06
2	Economics for Business Decisions	06	2	Macro Economics concepts and Applications	06
3	Cost and Management Accounting	06	3	Corporate Finance	06
4	Business Ethics and Corporate Social Responsibility	06	4	E-Commerce	06
	Total Credits	24		Total Credits	24



Master of Commerce (M.Com) Programme
Under Choice Based Credit, Grading and Semester System
Course Structure

(To be implemented from Academic Year- 2016-2017)

Semester I

No. of Courses	Semester I	Credits
1	Core Courses (CC)	
1	Strategic Management	06
2	Economics for Business Decisions	06
3	Cost and Management Accounting	06
4	Business Ethics and Corporate Social Responsibility	06
	Total Credits	24



Academic Council: 26/07/2019

Item No: 4.76

UNIVERSITY OF MUMBAI



Syllabus for M.Sc. Part I
(Semester I and II)

Programme: M.Sc.

Subject: Information Technology

(Choice Based Credit System with effect from
the academic year 2019 – 2020)



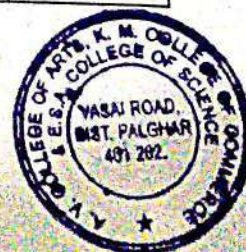
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M. Sc (Information Technology)		Semester – I	
Course Name: Soft Computing Techniques		Course Code: PSIT104	
Periods per week 1 Period is 60 minutes	Lectures	4	
	Credits	4	
Evaluation System	Hours	Marks	
	Theory Examination	2½	60
	Theory Internal	--	40

Objectives	<ul style="list-style-type: none"> Soft computing concepts like fuzzy logic, neural networks and genetic algorithm, where Artificial Intelligence is mother branch of all. All these techniques will be more effective to solve the problem efficiently
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Pre requisites	Basic concepts of Artificial Intelligence. Knowledge of Algorithms
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Unit	Details	Lectures
I	Introduction of soft computing, soft computing vs. hard computing, various types of soft computing techniques, Fuzzy Computing, Neural Computing, Genetic Algorithms, Associative Memory, Adaptive Resonance Theory, Classification, Clustering, Bayesian Networks, Probabilistic reasoning, applications of soft computing.	12
II	Artificial Neural Network: Fundamental concept, Evolution of Neural Networks, Basic Models, McCulloh-Pitts Neuron, Linear Separability, Hebb Network. Supervised Learning Network: Perceptron Networks, Adaptive Linear Neuron, Multiple Adaptive Linear Neurons, Backpropagation Network, Radial Basis Function, Time Delay Network, Functional Link Networks, Tree Neural Network. Associative Memory Networks: Training algorithm for pattern Association, Autoassociative memory network, hetroassociative memory network, bi-directional associative memory, Hopfield networks, iterative autoassociative memory networks, temporal associative memory networks.	12
III	UnSupervised Learning Networks: Fixed weight competitive nets, Kohonen self-organizing feature maps, learning vectors quantization, counter propogation networks, adaptive resonance theory networks. Special Networks: Simulated annealing, Boltzman machine, Gaussian Machine, Cauchy Machine, Probabilistic neural net, cascade correlation network, cognition network, neo-cognition network, cellular neural network, optical neural network Third Generation Neural Networks: Spiking Neural networks, convolutional neural networks, deep learning neural networks, extreme learning machine model.	12



IV	<p>Introduction to Fuzzy Logic, Classical Sets and Fuzzy sets: Classical sets, Fuzzy sets. Classical Relations and Fuzzy Relations: Cartesian Product of relation, classical relation, fuzzy relations, tolerance and equivalence relations, non-iterative fuzzy sets. Membership Function: features of the membership functions, fuzzification, methods of membership value assignments. Defuzzification: Lambda-cuts for fuzzy sets, Lambda-cuts for fuzzy relations, Defuzzification methods. Fuzzy Arithmetic and Fuzzy measures: fuzzy arithmetic, fuzzy measures, measures of fuzziness, fuzzy integrals.</p>	12
V	<p>Fuzzy Rule base and Approximate reasoning: Fuzzy proportion, formation of rules, decomposition of rules, aggregation of fuzzy rules, fuzzy reasoning, fuzzy inference systems, Fuzzy logic control systems, control system design, architecture and operation of FLC system, FLC system models and applications of FLC System. Genetic Algorithm: Biological Background, Traditional optimization and search techniques, genetic algorithm and search space, genetic algorithm vs. traditional algorithms, basic terminologies, simple genetic algorithm, general genetic algorithm, operators in genetic algorithm, stopping condition for genetic algorithm flow, constraints in genetic algorithm, problem solving using genetic algorithm, the schema theorem, classification of genetic algorithm, Holland classifier systems, genetic programming, advantages and limitations and applications of genetic algorithm. Differential Evolution Algorithm, Hybrid soft computing techniques – neuro – fuzzy hybrid, genetic neuro-hybrid systems, genetic fuzzy hybrid and fuzzy genetic hybrid systems.</p>	12

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Artificial Intelligence and Soft Computing	Anandita Das Battacharya	SPD	3rd	2018
2.	Principles of Soft computing	S.N.Sivanandam S.N.Deepa	Wiley	3 rd	2019
3.	Neuro-Fuzzy and Soft Computing	J.S.R.Jang, C.T.Sun and E.Mizutani	Prentice Hall of India		2004
4.	Neural Networks, Fuzzy Logic and Genetic Algorithms: Synthesis & Applications	S.Rajasekaran, G. A. Vijayalakshami	Prentice Hall of India		2004
5.	Fuzzy Logic with Engineering Applications	Timothy J.Ross	McGraw- Hill		1997

6.	Genetic Algorithms: Search, Optimization and Machine Learning	Davis E. Goldberg	Addison Wesley	1989
7.	Introduction to AI and Expert System	Dan W. Patterson	Prentice Hall of India	2009

M. Sc (Information Technology)		Semester – I	
Course Name: Soft Computing Techniques Practical		Course Code: PSIT1P4	
Periods per week 1 Period is 60 minutes	Lectures	4	
	Credits	2	
Evaluation System	Practical Examination	Hours 2	Marks 40

Practical No	Details
1 - 10	10 Practical based on above syllabus, covering entire syllabus

Course Outcome	<ul style="list-style-type: none"> Identify and describe soft computing techniques and their roles in building intelligent machines Recognize the feasibility of applying a soft computing methodology for a particular problem Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems Apply genetic algorithms to combinatorial optimization problems Apply neural networks for classification and regression problems Effectively use existing software tools to solve real problems using a soft computing approach Evaluate and compare solutions by various soft computing approaches for a given problem.
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