

UNIVERSITY OF LUCKNOW, LUCKNOW	
BA ECONOMICS under Semester System	
Name of Faculty	ARTS
Department	ECONOMICS
Programme Name	BA in ECONOMICS
Effective from:	JULY- 2018
Duration of Course	The duration of the course shall be six semesters over three years

PROGRAMME OVERVIEW

This program deals with the study and application of economic theory and economic decision making. Exposure to different sectors builds the analytical capacity of the students. The program aims at producing successful and competent economic analysts who are ethically and socially responsible professionals with an inter-disciplinary orientation.

PROGRAMME OBJECTIVES

The programs offered by the Department of Economics, University of Lucknow, Lucknow are designed to provide a general understanding of the functioning of the economic system and the role of institutions within that system; and prepare the student for employment in industry, the professions, and government, or to pursue graduate work toward such advanced degrees Economics or related fields.

LEARNING OUTCOMES

The learning output of this programme is to ensure the development of an understanding of Micro and Macro Theory and their application to Economic sub-fields. On successful completion of this course, the student should be well versed in the concepts, tools and principles in the field of Economics and related fields.

STRUCTURE OF THE PROGRAMME

The Under Graduate Economics programme shall have altogether fourteen (14) courses. Out of these two (02) papers shall be optional in nature. There shall be limited choice in optional papers. Semester I, Semester II, Semester III and Semester IV shall have two compulsory papers in each. Semester V as well as Semester VI shall have two compulsory and one optional paper in each. The structure of course with paper titles are as following;

BA in Economics	Name of the Paper and Number
Semester -I	Paper I: Microeconomics-I Paper II: Indian Economy-I
Semester-II	Paper III: Microeconomics-II Paper IV: Indian Economy-II
Semester-III	Paper V: Macroeconomics Paper VI: Public Finance
Semester-IV	Paper VII: Money and Banking Paper VIII: International Economics
Semester-V	Paper IX: History of Economic Thought-I Paper X: Environmental Economics Optional Paper: One of the following Paper XI (A): Industrial Economics Paper XI (B): Basic Statistics
Semester-VI	Paper XII: History of Economic Thought-II Paper XIII: Economic Growth and Development Optional Paper: One of the following Paper XIV (A): Economy of Uttar Pradesh Paper XIV (B): Elementary Mathematics for Economics

BA ECONOMICS
SEMESTER-I, Paper-I
Micro Economics-I

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course aims to introduce the students to the basic concepts of Microeconomics.

Unit-I Basic Economic Concepts:

Meaning and definition of economics, Problem of scarcity and choice, Opportunity cost and production possibility frontier, Methods of Economic Study, Static and Dynamic Economics, Equilibrium and its types.

Unit- II Demand Analysis and Consumer Behaviour-I:

Concept of Demand, Demand function, Law of Demand, Elasticity of Demand- Types, Measurement and Factors affecting demand elasticity. Utility Analysis- Cardinal Approach; Law of Diminishing Marginal Utility, law of Equi-Marginal utility, Consumer's Equilibrium

Unit- III Demand Analysis and Consumer Behaviour-II:

Utility Analysis- Ordinal Approach, Indifference curve analysis- Properties, Budget line and its slope, Consumer's Equilibrium, Price effect, Income effect and Substitution Effect, derivation of demand curve, Consumer's Surplus, Revealed Preference Theory.

Unit-IV Production:

Concept of Production, factors of production, production possibility curve, production function, Short run theory of production, Law of Variable proportions; Long run theory of production, Laws of Returns to scale, concept of Isocost line and Producer's Equilibrium.

Books Recommended;

1. Stonier and Hague: A text book of Economic theory
2. R.G. Lipsey: An Introduction to positive economics
3. P. A. Samuelson: Economics
4. Gould and Ferguson: Micro Economic Theory
5. Awasthi & Agnihotri: Arthik Siddhant

BA ECONOMICS
SEMESTER-I, Paper-II
Indian Economy-I

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course aims to introduce the students to the basic concepts of Indian Economy.

Unit I Development and Structure of Indian Economy

Concept of Growth and Development, Developed, developing and Emerging Market Economies (EME), Characteristics of Indian Economy, India's economic development during plan period, NITI Ayog and post- Plan development, Savings and Capital Formation in India

Unit II Demographic Characteristics of India

India's demographic Profile, Regional contrast and basic demographic characteristics, Rapid population growth and India's Population policies, Concept and Reasons of Migration, Basic Theories of Migration

Unit III Poverty and Unemployment

Concept of unemployment, types, measures to curtail unemployment in India, Poverty-relative and absolute, Measures of Poverty Alleviation, Employment generation Programmes, Inclusive Growth, Occupational Structure in the unorganized and unorganized sector, Economic Inequality, Social Security measures for India's population

Unit IV Foreign Trade and Investment

India's Foreign trade: Composition and direction, EXIM policy, Current account deficit and capital flows, FDI and Portfolio investment, Balance of trade and Balance of Payment.

Books Recommended:

1. AN Agarwal/MK Agarwal- Indian Economy
2. Rudra Dutt and KPM Sundaram- Indian Economy
3. Uma Kapila- Indian Economy 4
- . Misra and Puri- Indian Economy
5. Government of India- Economic Survey

BA ECONOMICS
SEMESTER-II, Paper-III

Micro Economics-II

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course aims to introduce the students to the basic concepts of Microeconomics.

Unit- I: Costs and Revenue

Concept and Types, Total, Average and Marginal cost: short run and long run, Inter relationship between cost curves. Concept of revenue, Total, Average and Marginal revenue and its interrelationship, shape of revenue curves. Break even analysis.

Unit-II: Market Structure and Price Determination

Structure of markets, perfect competition- characteristics, Equilibrium of firm and Industry, price determination under perfect competition, Monopoly-Characteristics, equilibrium, price or output determination under monopoly. Price discrimination and its degrees. Nature of Monopolistic competition-Characteristics, equilibrium, price and non-price competition.

Unit-III: Theory of Distribution-I

Concept of Factor income: Marginal Productivity theory, Concept of rent and Quasi rent, theories of rent: classical and modern, concept of quasi rent. Concept of Wage and Wage Determination; Theories: Classical, Neo-Classical and Modern.

Unit-IV: Theory of Distribution-II

Concept of Interest and its theories: Classical, Neo-Classical and Modern; Concept and Theories of Profit: Classical, Neo-Classical and Modern.

Books Recommended

- 1.** Stonier and Hague: A text book of Economic theory
- 2.** R.G. Lipsey: An Introduction to positive economics
- 3.** P. A. Samuelson: Economics
- 4.** Gould and Ferguson: Micro Economic Theory
- 5.** Awasthi & Agnihotri: Arthik Siddhant

BA ECONOMICS
SEMESTER-II, Paper-IV
Indian Economy-II

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course aims to introduce the students to the basic concepts of Indian Economy.

Unit I: Agriculture

Production, Growth and Structure, Resource limitations and role of Technical change in Agriculture, Land Reforms, Agricultural Marketing-need, objectives, defects and remedial measures, Agricultural Produce and Marketing Act (APMC), Agricultural Credit-Non Institutional and Institutional sources of credit.

Unit II: Industry and Services

Major Industries- Iron and Steel, Cement, Paper and Sugar Industries, Micro, Small and Medium Enterprises (MSMEs), Sources of Industrial Finance, Industrial Policy, Trade Unions and Social Security Measures for Industrial Labour.

Services- Growth of Trade, Hotels and Restaurants, Transport, Storage and Communication, Finance and Real Estate

Unit III: Infrastructure

Economic Infrastructure- Energy, Roads, Irrigation. Social Infrastructure- Health and Education

Unit IV: U.P. Economy

Demographic and Population features, poverty and unemployment. Growth and Pattern of Farm Sector, Development of Industrial Sector, Major Policy initiatives of Development.

Books Recommended:

1. A.N. Agarwal/MK Agarwal- Indian Economy
2. Rudra Dutt and KPM Sundaram- Indian Economy
3. Uma Kapila- Indian Economy
4. Manoj Kumar Agarwal- Uttar Pradesh ka Arthik Vikas
5. Government of India- Economic Survey
6. Misra and Puri- Indian Economy

BA ECONOMICS
Semester-III, Paper-V
MACROECONOMICS

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money and inflation.

Unit I: Introduction to Macroeconomics and Basic Concepts

Macro vs. Micro Economics, Macroeconomic issues, Limitations of Macroeconomics; Introduction to National Income, Concepts of GDP, GNP, NDP and NNP at market price and factor cost; Personal Income and Disposable Personal Income; Concept and Components of Saving and Capital Formation

Unit II: Measurement of Macroeconomic Variables

Approaches to the Measurement of GDP: Income, expenditure, product or Value added Methods, Difficulties of Estimating National Income, Circular Flow of Income and expenditure in two, three, and four-sector economy. Measuring Inflation rate and Unemployment rate; National Income and Economic Welfare; Green Accounting.

Unit III: Determination of Income and Employment

Basic Assumptions of Classical Theory - Classical Theory of Employment - Say's Law of Market - Wage - Price Flexibility (Pigou's Version) - Saving and Investment Equality - Evaluation of the Classical Theory of Employment; Keynesian Theory of Employment .

Unit IV: GDP: Its Components and Determinants

Actual and Potential GDP; Okun's Law, Components of GDP: Consumption Function; Saving Function; Investment Function; Concept of Multiplier; National Income Determination in two and three sectors economy; Simple IS-LM model.

Basic Reading List

Branson, W. A. , Macroeconomics: Theory and Policy, 3rd ed. Harper and Row, New York.

N. Gregory Mankiw, Macroeconomics, 7th edition, Cengage Learning India Private Limited, New Delhi

Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8 th Edition, 2007 3.

Lipsey R.G. and K.A. Christal, Principles of Economics 9th Ed., Oxford University Press.

Shapiro, E., Macroeconomics: Analysis, Galgotia Publication, New Delhi.

Stiglitz J. E. and Carl E. Walsh Principles of Macroeconomics, W.W. Norton and Company, New York.

Sauman Sikdar, Principles of Macroeconomics, Oxford University Press.

BA ECONOMICS

Semester - III, Paper-VI

PUBLIC FINANCE

Full marks: 100 (Mid Term-20 + End Term-80)

Unit-I: Introduction to Public Finance

Public Finance: Meaning, Nature, Scope and Importance; difference between Private and Public Finance; Principle of Maximum Social Advantage; Role of State in Public Finance.

Unit-II: Sources of revenue

Taxes, loans, grants and aid – meaning and types, canons/ principles of taxation, problem of justice in taxes, incidence of taxation, taxable capacity; Impact of taxation & tax evasion characteristics of Indian tax system, defects & steps of reform.

Unit-III: Public Expenditure and Debt

Principle of Public Expenditure; Principle of Public Debt and its Methods of Redemption; Effects of Public Expenditure on Production and Distribution; Public Debt in India.

Unit-IV: Public finance in India

Sources of Revenue of Central; State Government and Local Bodies; Concept and Types of Budget, Fiscal Deficit, Deficit Financing and Deficit Budget, Financial relation between Central and State; Finance commission; Fiscal Policy.

References:

Musgrave, Richard A. (1959), Theory of Public Finance, McGraw Hill, Kogakusha, Tokyo.

Musgrave, R. A. and P. B. Musgrave, 1980, Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.

Dalton, Hume, Principles of Public Finance, 1971, Routledge and Kegan Paul Limited, London.

Ganguly S., Public Finance, 1999, The World Press Private Ltd. Calcutta.

Mithani, D. M.; (1998), Modern Public Finance, Himalaya Publishing House, Mumbai.

Tyagi, B.P., Public Finance, Latest edition, Jain Prakash Nath & Company, Meerut.

Bhatia, H. L., Public Finance, Recent Edition, Vikas Publication, New Delhi.

Andley and Sundaram, Public Finance, Latest edition, Ratan Prakashan, Agra.

BA ECONOMICS
Semester - IV, Paper-VII
MONEY AND BANKING

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description: This course introduces students to the conceptual and practical operations of the Money, banking, financial markets and institutions. The course is intended to provide an in-depth understanding of the operational issues of capital and money market network along with its regulatory framework.

Unit I: Demand for Money

Money: Kinds, Functions and Significance, Monetary Standards: Metallic Standard, Gold Standard and Paper Standard, Value of money, Measurement of changes in the value of money, Demand for Money: The Classical Approach, Keynesian Approach.

Unit II: Supply of Money

Supply of Money: Definitions—Determinants of Money Supply—High Powered Money and Money Multiplier—Indian Currency system.

Unit III: Commercial Banking

Commercial banking: Nature; structure; functions: The process of credit creation-purpose and limitations, Pre-requisites of a sound commercial banking system; Liabilities and assets of Banks. ATM - Internet Banking - Core banking; A Critical Appraisal of the Progress of Commercial Banking after Nationalization; Recent Reforms in Banking Sector in India.

Unit IV: Central Banking

Role of central banks in developed and developing countries; Functions of a central bank; Role and functions of the Reserve Bank of India; methods of credit control: Quantitative- bank rate, repo rate, open market operations, variable reserve ratio and selective methods; Objectives and limitations of monetary policy; NPA's , Recent changes in monetary policy of India.

Readings

Chandler L.V., and S.M. Goldfeld (1977), The Economics of Money and Banking, Harper& Row, New York.

Ghosh and Ghosh, Fundamentals of Monetary Economics, Himalaya Publishing House
RR Paul, Monetary Economics, Kalyani Publishers

Gupta, S.B. (1995), Monetary Economics: Institutions, Theory and Policy, S. Chand & Co., New Delhi.

Hajela, T.N., (2009) Money and Banking, Ane Books Pvt Ltd., New Delhi

Sundharam KPM, Banking: Theory, Law and Practice, Sultan Chand and Sons, New Delhi

BA ECONOMICS
Semester - IV, Paper: VIII
INTERNATIONAL ECONOMICS

Full marks: 100 (Mid Term-20 + End Term-80)

Unit 1: Theories of International Trade

Need and Importance of International Trade, Free trade and protection, Mercantilism, Absolute Cost Advantage theory, Comparative Cost Advantage theory, Theory of Reciprocal demand, Terms of trade-Meaning, Types and Determination.

Unit 2 : The Balance of Payments

Concept and components of balance of trade and balance of payments. Disequilibrium and measures to correct balance of payments. Foreign trade of India and foreign trade policy of India.

Unit 3 : Foreign Exchange and Exchange rate

Meaning of foreign exchange rate and types- fixed, pegged, flexible, hybrid. Foreign exchange rate under gold standard, Purchasing power parity theory and modern theory of exchange rate, methods of controlling exchange rate- Unilateral and bilateral.

Unit 4: Financial Institutions

International monetary system: Bretton woods system and IMF, Objectives, Working Quota System, SDR, The World bank group- IBRD,IDA,IFC,MIGA,ICSID,ADB- Objectives, working and functions

References:

Bo Soderston, International Economics, Palgrave Macmillan.

Paul Krugman, Maurice Obstfeld and Marc Melitz, International Economics: Theory and Policy, Addison-Wesley (Pearson Education India Edition).

Dominick Salvatore, International Economics: Trade and Finance, John Wiley International.

H.G. Mannur, International Economics, Vikas Publishing House.

BA ECONOMICS
Semester - V, Paper: IX
History of Economic Thought-I
Full marks: 100 (Mid Term-20 + End Term-80)

Unit-I

Pre Classical Economic Thought:

Mercantilism, Physiocracy- their views on Economic Development.

Unit-II

Indian Economic Thought:

Kautilya, valluvar, Dada Bhai Naoroji, RC Dutt, BR Ambedkar, Gandhian Economics, JK Mehta.

Unit-III

Classical Economic Thought:

Evolution of Economic science, Smith's conception of growth and his criticism of Mercantilist and Physiocratic Doctrines; Smith's natural philosophy and Economic philosophy, Theory of Value- Cause and measure of value. Growth of National Product and its Distribution.

Unit-IV

Classical Economic Thought:

David Ricardo- development of Labor theory of value, theory of distribution and theory of growth; his views on machinery, Thomas Robert Malthus- theory of population, theory of Glut, Malthusian Glut and Keynesian Stagnation

Books Recommended:

1. Schumpeter, J A- History of Economic Analysis
2. Stigler, G J- Essay in the History of Economics
3. Dobb, Maurice- Theories of Value and Distribution since Adam Smith
4. O'Brien- Classical theory of Value and Distribution
5. Gide and Rist- History of Economic Doctrines
6. Meek, RL- Physiocracy
7. Meek, RL- The Labour theory of Value
8. Clair, St. Oswald- A Key to Ricardo

BA ECONOMICS

Semester - V, Paper: X

Environmental Economics

Full marks: 100 (Mid Term-20 + End Term-80)

Unit-I

Basic Concepts: Introduction to Environmental Economics, Economy-Environment Interaction, Material Balance Principle, Entropy Law

Unit-II

Environment vs Development: Relation between development and environmental stress, Environmental Kuznet's Curve, Concept of Sustainable Development, Resource and Resource Scarcity, Uncertainty and rate of resource extraction

Unit-III

Current Environmental Issues: Sources and types of pollution (Air, Water, Soil, Noise, Solid waste, e-waste, Land degradation), causes and effects of environmental degradation, Energy-Environment interaction, Global Warming and role of global agencies

Unit-IV

Environmental Policy of India: Evolution of environmental policy, Environment Laws, Fiscal incentives and Contract, Environmental Impact assessment, Peoples Participation in the management of Common Property Resources

Books Recommended:

1. Karpagam, M: Environmental Economics
2. Eugene, T: Environmental Economics
3. Hanley, N; Shogren, J.F ;White, B: Introduction to Environmental Economics
4. Kaithal, A. K. and Sanjeev Kumar: Environmental Economics
5. Kolstad, CD: Environmental Economics
6. Muzammil, M: Environmental Economics
7. Economic and Political Weekly
8. Plan Document and Economic Survey

BA ECONOMICS

Semester - V, Paper: XI-A

Industrial Economics

Full marks: 100 (Mid Term-20 + End Term-80)

UNIT-I: INTRODUCTION TO INDUSTRIAL ECONOMICS

Concept and Organization of a firm - Ownership control and objectives of a firm, Passive and active behavior of firm, Size, Growth, Profitability, Productivity, Efficiency and Capacity Utilization - Concept and measurement. Industrial policy, Classification of industries in India, Role of Public and private sectors; Recent trends in Indian industrial growth.

UNIT-II: LOCATION AND REGIONAL DEVELOPMENT OF INDUSTRY

Determinants of Industrial Location - Technical, economic, infrastructural and other factors. Theories of industrial location - Weber, August Losch, Sargant Florence, Development of Backward Regions - Government Policy and approach for the development of backward regions.

UNIT-III: INDUSTRIAL STRUCTURE AND LABOUR

Alternative Patterns of Industrialization - Hoffman's hypothesis of capitalistic economies - Simon Kuznet's interpretation - Industrialization and planned economies - Cheney's Patterns of industrial changes . Structure of industrial labour, Industrial relations, Exit policy, Social Security Measures and Labour Reforms in Indian Context.

UNIT-IV: PROJECT APPRAISAL AND INDUSTRIAL FINANCE

Project Appraisal Techniques – CBA, NPV and IRR, Sources of Industrial Finance - Owned, external and components of funds; Nature, Volume and Types of institutional finance – IDBI, IFCI, SFCs, SIDC, Commercial Banks, etc.;

Reading List

1. Ahluwalia, I.J: Industrial Growth in India (Oxford University Press, New Delhi, 1985)
2. Barthwal, R.R: Industrial Economics (Wiley Eastern Ltd, New Delhi, 1985)
3. Cherunilam F: Industrial Economics: Indian Perspective (3rd Edition) (Himalaya Publishing House, Mumbai, 1994)
4. Desai B: Industrial Economy in India (3rd Edition) (Himalaya Publishing House, Mumbai, 1999)
5. Divine P.J & R.M Jones et. Al: An Introduction to Industrial Economics (George Allen and Unwin Ltd, London, 1976)

BA ECONOMICS

SEM- V, Paper: XI-B

Basic Statistics

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description

The objective of this sequence is to transmit the body of basic statistics that enables the study of economic theory at the undergraduate level. In this course, particular economic models are not the ends, but the means for illustrating the method of applying statistics to economic theory in general.

UNIT - I:

Nature, Significance and Limitations of Statistics, Collection of data; Primary and Secondary Data; Methods of collecting Primary and Secondary Data, Classification and Tabulation of Data.

(8 Lectures)

UNIT – II:

Diagrammatic and graphical representation of data - Bar diagrams - One dimensional and Two dimensional diagrams, Pictograms and Cartograms, Frequency Distribution - Univariate and Bivariate Frequency Distributions, Histogram, Frequency Curve, Ogive Curves.

(8 Lectures)

UNIT – III

Measures of Central Tendency - Mean, Median and Mode - their Merits and Demerits, Geometric Mean, Harmonic Mean, Relationship between AM, GM and HM, Combined Mean .

(12 Lectures)

UNIT – IV:

Measures of Dispersion - Range, Mean deviation, Quartile Deviation, Standard Deviation and Lorenz Curve; Skewness - Karl Pearson's and Bowley's Coefficient of Skewness, Simple Correlation.

(12 Lectures)

Readings

1. Jay L. Devore: *Probability and Statistics for Engineering and the Sciences*, Cengage learning,
2. S. C. Gupta: *Fundamentals of Statistics*, Himalaya Publishing House, New Delhi
3. Murray R. Spiegel : *Theory & Problems of Statistics*, Schaum's publishing Series.

BA ECONOMICS

Semester - VI, Paper: XII

History of Economic Thought-II

Full marks: 100 (Mid Term-20 + End Term-80)

Unit-I

Neo Malthusian: J B Say- Say's law of market, Say's identity and quantity. Theory of money Keynes and Say's law; Nassau Senior, J S Mill and Synthesis of Classical Ideas. The down fall of Classical System

Unit-II

Neo Malthusian:

Classical legacy and Marxism- Approach to economic problem, Dialectical Materialism, Historical Determinism capitalist crisis, Socialists and the Institutionalists

Unit-III

Debate on Methods of Economic Analysis:

Historical school, Marginal revolution demand side analysis, Criticism of classical theory of value and distribution, Evolution of new theory of value of distribution: Menger, Walras and Jevons

Unit-IV

Debate on Methods of Economic Analysis:

Extension of new theory: Wieser, Bohm-Bawerk, Wiksteed, Edgeworth, Further developments of new theory, Wicksteed and Schumpeter, Fusion of Demand and Supply; Marshall, Politico Philosophical background, Evaluation of natural law, Individualism, Liberalism and Utilitarianism

Books Recommended:

1. Schumpeter, J A- History of Economic Analysis
2. Stigler, G J- Essay in the History of Economics
3. Dobb, Maurice- Theories of Value and Distribution since Adam Smith
4. O'Brien- Classical theory of Value and Distribution
5. Gide and Rist- History of Economic Doctrines
6. Meek, RL- Physiocracy
7. Meek, RL- The Labour theory of Value
8. Clair, St. Oswald- A Key to Ricardo

BA ECONOMICS
SEM- VI, Paper-XIII
ECONOMICS OF GROWTH AND DEVELOPMENT

Full marks: 100 (Mid Term-20 + End Term-80)

Course Description

The objective of this course is to aware the students about the concepts and basic model of economic growth and development.

Unit I: Economic Growth and Development

Conception of Development Economic Growth and Development-Definition, Distinction and Measurement, Traditional Economic Measures- GNP, GDP, income per capita, Characteristics of developing nations, Economic and Non-Economic factors in economic development.

Unit II: Major Concerns of Development

Poverty and Inequality- Concept of Vicious Circle of Poverty, Measuring Absolute Poverty, Poverty Line, Poverty Gap, FGT poverty measure and HPI Concept of Inequality, Unemployment, Concept of Human Development and Its Indices:: HDI, PQLI, HPI and GDI.

Unit III: Theories of Economic Growth and Development

Lewis model of labour surplus economy, Rosentein Rodan's theory of Big Push, Nelson's Level equilibrium trap, balanced vs Un-balanced growth, Rostow's stages of growth, Harrod and Domar Growth models.

Unit IV: Development and International Issues

International aspects of economic development; International trade, FDI, FII, Regional cooperation (SAPTA, NAFTA, SAARC, BRICS etc.) , WTO and developing countries.

Readings

- A.P Thirlwal, Economics of Development, Palgrave macmillan, Ninth Edition, 2014
- Charles I. Jones Introduction to Economic Growth, Viva-Norton Student Edition, second edition, 2013.
- Gerald M. Meier, Leading Issues in Economic Development, OUP, Eighth edition, 2010.
- Todaro and Smith, Economic Development, Pearson Education Ltd., Eighth Edition, 2009.

BA ECONOMICS
SEM- VI, Paper-XIV-A
Economy of Uttar Pradesh

Full marks: 100 (Mid Term-20 + End Term-80)

UNIT I: Introduction Overview of Uttar Pradesh Economy

Nature, Features, Demographic Profile, Status of Natural Resources, Major Factors affecting growth and development in Uttar Pradesh: economic and non-economic factors in economic development of Uttar Pradesh.

UNIT II: Growth Pattern of Uttar Pradesh Economy

Sectoral growth pattern of in Uttar Pradesh; Economic growth in Uttar Pradesh and Indian economy: A comparison; Infrastructural development of Uttar Pradesh.

UNIT III: Agricultural and Rural Development in Uttar Pradesh

Pattern of land-holding and irrigation; production and productivity in agriculture, Farm mechanization, Crop diversification, agricultural credit, Agricultural policy and strategies in Uttar Pradesh, Rural Development – Problems and Policies.

UNIT IV: Industry and Service Sectors Industrial and service sector development in UP

Major industries in Uttar Pradesh, Pattern of Industrial Development in Uttar Pradesh, Industrial Policy in Uttar Pradesh, Growth pattern of Services sector and Its linkages of other sectors of UP Economy.

Readings

1. M K Agarwal, Uttar Pradesh ka Arthik Vikas.
2. Publications of the Government of Uttar Pradesh.
3. Uttar Pradesh Human Development Report, UNDP, 2008.
4. Uttar Pradesh State Development Report, Volume I & II, State Plan Division, Planning Commission, Government of India, 2014.

BA ECONOMICS
SEM- VI, Paper-XIV-B
Elementary Mathematics for Economics
Full marks: 100 (Mid Term-20 + End Term-80)

Course Description

The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general.

UNIT - I: Preliminaries

Sets and set operations; relations; functions and their properties; Number Systems and Introduction of algebraic series, Basic Trigonometry Identities.

(8 Lectures)

UNIT – II: Functions of one real variable

Types of functions- constant, polynomial, rational, exponential, logarithmic; Graphs and graphs of functions; Limit and continuity of functions; Limit theorems

(8 Lectures)

UNIT – III: Matrices & Determinants

Matrices: concept, types, matrix algebra, transposes of a matrix, inverse of a matrix, rank of a matrix; matrix inversion method and its economic application, Determinants: concept, properties, solving problems using properties of determinants, solution to a system of equations - Cramer's rule and its economic application

(10 Lectures)

UNIT – IV: Differentiation

First order derivative and its application in Economics; Slope and elasticity of demand, Determination of Marginal revenue, marginal cost and marginal product; Second order derivative and its application in Economics, Point of inflexion, Concavity and convexity of curve, problem of maximization and minimization of certain economic variables.

(12 Lectures)

Readings

Allen, R.G.D (2006): [*Mathematical Analysis For Economists*](#), Macmillan And Company Limited

A. C. Chiang and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.

T. Yamane (2012): *Mathematics for Economists*, Prentice-Hall of India

K. Sydsaeter and P. J. Hammond (2002): *Mathematics for Economic Analysis*, Pearson Educational Asia

Mehta and Madnani: *Mathematics for Economists*, New Delhi: Sultan Chand Company