

Learning Outcomes Based Curriculum Framework (LOCF)

for

Economics

Undergraduate Programme



Department of Economics

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Assam

PART I

1.1 Introduction

“Economics is the science which studies human behaviour as a relationship between given ends and scarce means which have alternative uses.” –Lionel Robbins

The word "economics" is derived from the Greek word “oikonomia” (*oikos* meaning "family, household, estate, and *nomos* meaning custom, law, management) which means "household management". Over time, the word "oikonomia" was used for an economy as a whole in the sense that how a nation takes steps to fulfill its desires and preferences with the help of scarce means. That is why, economics was called political economy in its early ages. In the words of the British economist Alfred Marshall, “Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing”. Thus, it is on one side a study of wealth; and on the other, a part of the study of man. For a layman, economics is all about money. Economics is not just about money. It is about making choices or weighing different alternatives. The reason behind this is that human wants are unlimited but the means or resources to satisfy these wants are scarce. That is why economics is nicknamed a “*dismal science*” because it is all about running out of resources and managing our desires with limited resources. Economics is the study of scarcity and its implications for the use of resources. It emphasises efficient utilisation of resources and avoiding wasteful choices. Economics, therefore, enhances decision-making skills. As a social science, Economics encompasses within its mandate various issues such as production and employment, investment and savings, education, health, money, the banking system, government policies on taxation and spending, international trade, industrial organization and regulation, urbanization, population dynamics and environmental issues.

This undergraduate course in Economics has been designed to impart knowledge of various branches of Economics like Microeconomics, Macroeconomics, International Economics, Financial Economics, Monetary Economics, Public Economics, Development Economics, and Environmental Economics, along with acquiring skills in Statistics, Mathematical Economics, and Econometrics which will help students in building a strong foundation of the subject. Further, this will keep the door open for students, enabling them to pursue their choice of preferred career options in the future.

1.2 Learning Outcomes-based Approach to Curriculum Planning and Development

The basic objective of the learning outcome based approach to curriculum planning and development is to focus on demonstrated achievement of outcomes (expressed in terms of knowledge, understanding, skills, attitudes and values) and academic standards expected of graduates of a programme of study. Learning outcomes specify what graduates completing a particular programme of study are expected to know, understand and be able to do at the end of their programme of study.

The expected learning outcomes are used to set the benchmark to formulate the course outcomes, programme specific outcomes, programme outcomes and graduate attributes. These outcomes are essential for curriculum planning and development, and in the design, delivery and review of academic programmes. They provide general direction and guidance to the teaching-learning process and assessment of student learning levels under a specific programme.

The overall objectives of the learning outcomes-based curriculum framework are to:

- help formulate graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes that are expected to be demonstrated by the holder of a qualification;
- enable prospective students, parents, employers and others to understand the nature and level of learning outcomes (knowledge, skills, attitudes and values) or attributes a graduate of a programme should be capable of demonstrating on successful completion of the programme of study;
- maintain national standards and international comparability of learning outcomes and academic standards to ensure global competitiveness, and to facilitate student/graduate mobility; and
- provide higher education institutions an important point of reference for designing teaching-learning strategies, assessing student learning levels, and periodic review of programmes and academic standards.

1.3 Key outcomes underpinning curriculum planning and development

The learning outcome-based curriculum framework is a framework based on the expected learning outcomes and academic standards that are expected to be attained by graduates of a programme of study. The key outcomes that underpin curriculum planning and development include Graduate Attributes, Programme Outcomes, Programme Specific Outcomes, and Course Outcomes.

1.3.1 Graduate Attributes

The disciplinary expertise or technical knowledge that has formed the core of the university courses. They are qualities that also prepare graduates as agents for social good in future. Some of the characteristic attributes that a graduate should demonstrate are as follows:

1. **Disciplinary knowledge:** Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines
2. **Research-related skills:** A sense of inquiry and capability for asking relevant/appropriate questions, problematising, synthesising and articulating
3. **Analytical reasoning:** Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others
4. **Critical thinking:** Capability to apply analytic thought to a body of knowledge
5. **Problem solving:** Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems
6. **Communication Skills:** Ability to express thoughts and ideas effectively in writing and orally

7. **Information/digital literacy:** Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.
8. **Self-directed learning:** Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.
9. **Cooperation/Team work:** Ability to work effectively and respectfully with diverse teams
10. **Scientific reasoning:** Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective
11. **Reflective thinking:** Critical sensibility to lived experiences, with self-awareness and reflexivity of both self and society.
12. **Multicultural competence:** Possess knowledge of the values and beliefs of multiple cultures and a global perspective
13. **Moral and ethical awareness/reasoning:** Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work
14. **Leadership readiness/qualities:** Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.
15. **Lifelong learning:** Ability to acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.

1.3.2 Programme Outcomes (POs) for Undergraduate programme (Honours)

POs are statements that describe what the students graduating from any of the educational programmes should be able to do. They are the indicators of what knowledge, skills and attitudes a graduate should have at the time of graduation.

1. **In-depth knowledge:** Understand the concepts and processes related to an academic field of study and demonstrate the applicability of their domain knowledge and its links to related disciplinary areas/subjects of study.
2. **Specialised knowledge and skills:** Demonstrate procedural knowledge and skills in areas related to one's specialization and current developments, including a critical understanding of the latest developments in the area of specialization, and an ability to use established techniques of analysis and enquiry within the area of specialisation.
3. **Analytical and critical thinking:** Demonstrate independent learning, analytical and critical thinking of a wide range of ideas and complex problems and issues.
4. **Research and Innovation:** Demonstrate comprehensive knowledge about current research in the subject of specialisation; critical observation to identify research problems and to collect relevant data from a wide range of sources, analysis and interpretation of data using

methodologies as appropriate to the area of specialisation for formulating evidence-based research output.

5. **Interdisciplinary Perspective:** Commitment to intellectual openness and developing understanding beyond subject domains.
6. **Communication Competence:** Demonstrate effective oral and written communicative skills to convey disciplinary knowledge and to communicate the results of studies undertaken in an academic field accurately in a range of different contexts using the main concepts, constructs and techniques of the subject(s) of study
7. **Career development:** Show proficiency in academic, professional, soft skills and employability required for higher education and placements.
8. **Teamwork:** Work in teams with enhanced interpersonal skills leadership qualities.
9. **Commitment to the society and the Nation:** Recognise the importance of social, environmental, human and other critical issues faced by humanity at the local, national and international level; appreciate the pluralistic national culture and the importance of national integration.

1.3.3 Programme Specific Outcomes (PSOs) in Economics

Programme specific outcomes include subject-specific skills and generic skills, including transferable global skills and competencies, the achievement of which the students of a specific programme of study should be able to demonstrate for the award of the degree. The programme specific outcomes would also focus on knowledge and skills that prepare students for further study, employment, and citizenship. They help ensure comparability of learning levels and academic standards across universities and provide a broad picture of the level of competence of graduates of a given programme of study. The attainment of PSOs for a programme is computed by accumulating PSO attainment in all the courses comprising the programme.

PSO1: Understand basic concepts and theories of economics

PSO2: Familiarity with basic quantitative tools and their applications in economics

PSO3: Develop analytical ability and other cognitive skills

PSO4: Comprehend and evaluate economic policies

PSO5: Develop interest in taking up higher studies in economics, including research

1.3.4 Course Level Learning Outcome Matrix

1.3.4.1 Course Outcomes (COs) and Programme Outcomes (POs) matrix

PO-CO mapping: **Core Papers**

Programme Outcomes	101	102	201	202	301	302	303	401	402	403	501	502	601	602
In-depth knowledge	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Specialised knowledge and skills	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Analytical and critical thinking			x	x	x	x	x	x	x	x	x	x	x	x
Research and Innovation			x				x			x	x		x	x
Interdisciplinary Perspective	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Communication Competence									x		x	x	x	x
Career development	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Teamwork							x			x				
Commitment to the society and the Nation				x		x			x		x	x	x	x

PO-CO mapping: **Elective and DSE papers**

Programme Outcomes	103GE	203GE	304GE	404GE	503 DSE1	504 DSE1	505 DSE2	603 DSE3	604 DSE3	605 DSE4	606 DSE4
In-depth knowledge					x	x	x	x	x	x	x
Specialised knowledge and skills					x	x	x	x	x	x	x
Analytical and critical thinking					x	x	x	x	x	x	x
Research and Innovation					x	x	x	x	x	x	x
Interdisciplinary Perspective	x	x	x	x		x	x	x	x	x	x
Communication						x	x	x			x

1.4 Teaching-learning process

The department of Economics, Cotton University has a strong student-centric teaching-learning process for a fruitful learning experience of the students. The department mostly undertakes classrooms lectures which are substantially interactive. Teaching is generally facilitating in nature to encourage self-learning on the part of the learners. Practice sessions for better understanding of the courses offered are regularly scheduled.

Exposure visits, orientation programs, invited lectures, seminars are regularly arranged to enhance learning, develop applications of the skills acquired, encourage innovative thinking and creativity, provide exposure to the academic and research advancements in the field of Economics.

Students are encouraged and facilitated in taking up minor research projects. To motivate the students towards research and creativity, they are engaged in various activities relating to department project works. Students are assisted in their learning by providing library facilities in the department.

1.5 Assessment methods

The department of Economics considers a few assessment methods appropriate to the discipline, based on the overall course requirements. Student's progress towards achievement of the learning outcomes is on the basis of continuous evaluation. This process comprises both internal assessment covering 30% of the total evaluation and external assessment covering the remaining 70% of the total. The systems in place include class assignments, oral presentations, practice sessions for data handling using various software packages available. Paper setting for each course meticulously considers the understanding, application skills, analytical and evaluative capabilities as well as creative power of each learner.

PART II
Structure of Under-Graduate programme in Economics
Course structure

UG SEMESTER I

Course	Paper Title	Credits (L+T+P)
ECO101C	Introductory Microeconomics-I	5+1+0
ECO102C	Mathematical Methods For Economics-I	5+1+0
ECO103GE	Introductory Microeconomics	5+1+0

UG SEMESTER II

Course	Paper Title	Credits (L+T+P)
ECO201C	Introductory Macroeconomics-I	5+1+0
ECO202C	Mathematical Methods For Economics-II	5+1+0
ECO203GE	Introductory Macroeconomics	5+1+0

UG SEMESTER III

Course	Paper Title	Credits (L+T+P)
ECO301C	Intermediate Microeconomics-I	5+1+0
ECO302C	Intermediate Macroeconomics-I	5+1+0
ECO303C	Statistical Methods for Economics	5+1+0
ECO304GE	Indian Economy-I	5+1+0
ECO001S	Research Methodology for Social Sciences	2+0+0

UG SEMESTER IV

Course	Paper Title	Credits (L+T+P)
ECO401C	Intermediate Microeconomics-II	5+1+0
ECO402C	Intermediate Macroeconomics-II	5+1+0
ECO403C	Introductory Econometrics	5+1+0
ECO404GE	Indian Economy-II	5+1+0
ECO002S	An Introduction to Survey Research	2+0+0

SEMESTER V		
Course	Paper Title	Credits (L+T+P)
ECO501C	Indian Economy-I	5+1+0
ECO502C	Development Economics-I	5+1+0
	Discipline Specific Elective (DSE)-1&2	
ECO503DSE1	Applied Econometrics	5+0+1
ECO504DSE1	Public Economics	5+1+0
ECO505DSE2	Money and Financial Markets	5+1+0
SEMESTER VI		
ECO601C	Indian Economy-II	5+1+0
ECO602C	Development Economics-II	5+1+0
	Discipline Specific Elective (DSE)-3&4	
ECO603DSE3	Financial Economics	5+1+0
ECO604DSE3	Environmental Economics	5+1+0
ECO605DSE4	International Economics	5+1+0
ECO606DSE4	Economy of The Northeast	5+1+0

UG SEMESTER I

Course	Paper Title	Credits (L+T+P)
ECO101C	Introductory Microeconomics-I	5+1+0
ECO102C	Mathematical Methods For Economics-I	5+1+0
ECO103GE	Introductory Microeconomics	5+1+0

Core Course 1
Introductory Microeconomics-I

Paper Code: ECO101C

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

This course brings in inclusivity among student groups by closing the knowledge gap between those who are new to the subject and those already conversant in basic economic concepts. It acquaints students with various aspects of consumer decisions, choices and their welfare implications. The course also imparts knowledge about various aspects of economic concepts used in the analysis of costs and production processes.

Course outcomes (CO)

CO1: Comprehend new concepts, vital to the understanding of economics of information, property rights and public policy.

CO2: Understand the process of optimum decision making by individuals as consumers, knowledge of price effects and its application in practical field.

CO3: Interpret government interventionist procedures with regard to prices and fiscal matters.

CO4: Develop adequate knowledge of production functions, production techniques and cost concepts indifferent time periods.

CO5: Adopt and apply optimum choices in the production sphere with linear programming technique.

Course Outline

1. Review of basic concepts (20)

Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; The Edgeworth Box, the production possibility frontier; Demand-supply analysis- up to elasticity of demand (concepts only), the basic competitive model; prices, allocation of resources, efficiency and perfect competition; Property rights, prices and market failure; incentives and information; rationing.

2. Demand Analysis: (30)

Consumers optimal position: Consumption and income/price changes; demand for all other goods and price changes; Decomposition of price effect: labour supply and savings decision -choice between leisure and consumption; Slutsky equation; buying and selling; choice under risk and inter-temporal choice; revealed preference(concepts). The demand curve: elasticity and its application; consumer surplus; controls on prices; taxes and the costs of taxation.

3. Production and costs (25)

Technology: isoquants; technical progress, production with one and more variable inputs; Laws of return: returns to scale and returns to variable factor; short run and long run costs; Elasticity of substitution-Cobb-Douglas; linear programming: simplex method, duality.

Readings

- Karl E. Case and Ray C. Fair, Principles of Economics, 9th Ed.; Pearson Education Inc.,
- Daniel Rubinfeld and Robert Pindyck, Microeconomics, Pearson Education; Eighth edition (latest edition)
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by SouthWestern, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
- Hal R. Varian, Intermediate Microeconomics A Modern Approach, W. W. Norton & Company, Inc.
- Christopher Snyder & Walter Nicholson, Microeconomic Theory Basic Principles and Extensions, Cengage; 11 edition (2014)

Core Course 2
MATHEMATICAL METHODS FOR ECONOMICS-I
Paper Code: ECO102C
6 credits (L+T+P): 5+1+0
Lecture Hours: 75

Course Objective

To familiarize students with the applications of mathematical tools in solving economic problems

Course outcomes (CO)

CO1: Develop the basic mathematical skills of the students by familiarizing them with Set theory, function, sequence and Number system for economic decision making.

CO2: Apply calculus in economics

CO3: Apply mathematical tools for optimisation and taking economic decisions.

CO4: Apply matrix operations in solving economic problems involving simultaneous equation system.

Course Outline

Unit 1: Preliminaries (15)

Sets and set operations; relations; functions- Types and graphs; Range; Domain; Limit and continuity of a function; Equations and Identity; sequences and series; Number system; Convergence and divergence.

Unit 2: Differentiation (15)

Concept of Derivative, Basic rules of Differentiation ,Partial and total Differentiation, Differentials and Derivatives , Chain Rule of Differentiation, Applications of Differentiation – Elasticity of Demand, cost and revenue functions finding Marginal Revenue Functions from Average Revenue Function, Relationship between AC and MC, Application to Comparative static analysis of Market Model and National Income Model

Unit 3: Single Variable Optimization (15)

Geometric interpretation of optimization- local and global optima; Unconstrained optimization with single explanatory variable- economic applications; Cost Revenue, Tax Revenue, Profit and Firm's Equilibrium

Unit 4: Integration (15)

Integration of a function – Basic rules of Integration (Indefinite Integration), simple numerical problems and simple Economic applications of Indefinite Integrals.

Unit 5: Matrix and Determinants (15)

Elements of Matrix algebra- Definition, Types of Matrices, Matrix operations- Addition of Matrices Subtraction of Matrices, scalar multiplication, Matrix multiplication, Transpose of a Matrix, Rank of a Matrix.

Determinants – Definition, Matrix Inversion , properties of Determinants – solution of simultaneous equation system- Cramer's Rule, Application to partial equilibrium market Model: Simple National Income Model.

Readings:

1. A. C. Chiang & K. Wainwright (2005) Fundamental Methods of Mathematical Economics, McGraw Hill Education.
2. K. Sydsaeter P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
3. Prof. S. Barua, (2000), Basic Mathematics and its Economic Applications, Macmillan.

Generic Elective (GE) Course-1

Introductory Microeconomics

Paper Code: ECO103GE

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

To expose students to the basic principles of microeconomics and the functioning of different market structures

Course Outcomes (CO)

CO1: Understand basic principles of microeconomics

CO2: Understand and apply the mechanism of demand and supply and market equilibrium

CO3: Analyze different market structure and their workings, along with factor markets

Course Outline

Unit 1: Exploring the subject matter of Economics (12)

Why study economics; Nature and scope of economics, economics as a positive or normative science; the economic problem; scarcity and choice; the question of what to produce, how to produce and how to distribute output; Methods, laws and assumptions of economic theory; Economic systems; Concept of equilibrium

Unit 2: Demand and Supply (13)

Law of demand, determinants of demand, shift of demand versus movements along a demand curve, market demand, law of supply, determinants of supply, shift of supply versus movements along a supply curve, market supply, market equilibrium, consumer's and producer's surplus; Price elasticity of demand

Unit 3: The Households (15)

The consumption decision- budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences with indifference curves; properties of indifference curves; consumer's optimum choice

Unit 4: Perfect Competition (15)

Theory of perfect competition, equilibrium of the firm in the short-run and long-run, supply curve

Unit 5: Imperfect Market Structure (10)

Monopoly and anti-trust policy; oligopoly- collusive and non-collusive, kinked demand curve; monopolistic competition

Unit 6: Introduction to Factor Market (10)

The demand for labour, the supply of labour, equilibrium in labour market; shift in labour supply, shift in labour demand

Readings

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

N. G. Mankiw, Economics: Principles and Applications, India edition by South Western, Cengage Learning, 4th Edition, 2017.

Joseph Stiglitz and Carl E Walsh, Economics, W.W. Norton and Company, 4th Edition, 2007.

UG SEMESTER II

Course	Paper Title	Credits (L+T+P)
ECO201C	Introductory Macroeconomics-I	5+1+0
ECO202C	Mathematical Methods For Economics-II	5+1+0
ECO203GE	Introductory Macroeconomics	5+1+0

Core Course 3**INTRODUCTORY MACROECONOMICS****Paper Code: ECO201C****6 credits (L+T+P): 5+1+0**

Lecture Hours: 75

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, inflation, and the balance of payments.

Course Outcomes (CO):

CO1: **Understand** the concept of GDP and GNP, enabling them to analyze the status of the economy, its growth over time in a compatible manner.

CO2: **Analyse** the basics of monetary economics which will enable them to understand the debate between the monetarists and the Keynesians at a higher level.

CO3: **Understand** the theories that explain one of the maladies of market economy that comes in the form of inflation. Comprehension of the significance of price stability and the socio-economic costs of its absence.

CO4: **Understand** the fundamental Keynesian macroeconomic model and also the standard interpretation of the same by Hicks and others. Students will also learn about the link between theory/model with policy making, and how to examine different policy options.

Course Outline

Unit 1: Introduction to Macroeconomics and National Income Accounting (25)

Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts

Unit 2: Money (15)

Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy

Unit 3: Inflation (15)

Inflation and its social costs; hyperinflation

Unit 4: The Closed Economy in the Short Run (20)

Classical and Keynesian systems; simple Keynesian model of income determination; ISLM model; fiscal and monetary multipliers

Readings:

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009

Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc. 7th edition, 2011.

Errol D'Souza, *Macroeconomics*, Pearson Education, 2009

Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Core Course 4

MATHEMATICAL METHODS FOR ECONOMICS-II

Paper Code: ECO202C

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

The main objective of the course is to enable students to apply higher level of mathematical tools in solving microeconomic problems

Course outcomes (CO)

CO1: Understand the dynamic analysis using differential and difference equations.

CO2: Apply mathematical tools for optimisation and taking economic decisions.

CO3: Develop the understanding of the fundamentals of game theory.

Course Outline

Unit 1: Difference and Differential Equations (15)

First order difference equations – The Cobweb model; first order differential equations – the Domar economic growth model.

Unit 2: Unconstraint optimization (15)

Unconstrained Maxima and Minima with more than one explanatory variable using calculus and economic applications: Discriminating Monopoly (Restricted to two variables)

Unit 3: Constrained optimization (15)

Constrained optimization with equality constraints: geometric Characterizations, Lagrange characterization using calculus and economic applications: consumer's equilibrium and producer's equilibrium.

Unit 4: Introduction to Game Theory (16)

Introduction and concepts; Two- person Zero-sum game: pure strategies with saddle point, games without saddle point – the rules of dominance- solution of Games- solution of games without saddle point- mixed strategies, Prisoner's Dilemma.

Unit 5: Integration (14)

Methods of integration - integration by parts, integration by substitution; derivation of total functions from marginal functions; definite integrals; applications in the case of consumer's surplus and producer's surplus.

Readings:

A. C. Chiang & K. Wainwright (2005) Fundamental Methods of Mathematical Economics, McGraw Hill Education.

K. Sydsaeter P. Hammond, Mathematics for Economic Analysis , Pearson Educational Asia: Delhi, 2002.

Prof. S. Barua, (2000), Basic Mathematics and its Economic Applications, Macmillan.

R. Gibbons (1992). Game Theory for applied Economists, Princeton University Press; Reprint edition.

INTRODUCTORY MACROECONOMICS

Paper Code: ECO203GE

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

Basic introduction to principal macroeconomic aggregates

Course Outcomes (CO)

CO1: Understand different aggregates pertaining to national income, estimation of national income both for closed economy and open economy

CO2: Understand the concepts of money and monetary economics

CO3: Understand and analyse basic Keynesian economics.

CO4: Evaluate maladies of a modern economy

Course Outline

Unit 1: Introduction to Macroeconomics and National Income Accounting (25)

Basic issues studied in macroeconomics; circular flow of national income; concepts of GDP, GNP, NDP, NNP, GDP deflator; Three methods of calculation of national income, GDP as an indicator of economic performance of a country; Balance of Payment: current and capital account (concept only)

Unit 2: Money (15)

Functions of money; quantity theory of money; determination of money supply and demand (concept only); credit creation; tools of monetary policy

Unit 3: The Simple Keynesian Model (15)

Model of income determination; Consumption function; Multiplier analysis with autonomous investment

Unit 4: Macroeconomic instability (20)

Inflation- concept, causes of inflation, effects of inflation; anti-inflationary measures; unemployment: meaning and types

Readings

H.L. Ahuja, *Macroeconomics-Theory and Policy*, S. Chand, 20th Edition

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009

Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc. 7th edition, 2011.

Errol D'Souza, *Macroeconomics*, Pearson Education, 2009

UG 3rd Semester

Course	Paper Title	Credits (L+T+P)
ECO301C	Intermediate Microeconomics-I	5+1+0
ECO302C	Intermediate Macroeconomics-I	5+1+0
ECO303C	Statistical Methods for Economics	5+1+0
ECO304GE	Indian Economy-I	5+1+0

Paper Code: ECO301C
6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objectives:

The main objective of the course is to explain the essential features and functioning of perfect and imperfect market structures and to put forward an understanding of government policies with regard to different market structures. It will also introduce the key concepts in the input market and theoretical conceptualization of input pricing and input behavior, with special emphasis on labour.

Course outcomes (CO)

CO1: Understand and evaluate the features and functioning of competitive markets

CO2: Understand and analyze optimal decision-making processes applicable in the sphere of costs, output and production.

CO3: Analyze the features and functioning of markets with monopoly power and the regulatory practices followed therein.

CO4: Understand and evaluate input markets and their applications

Course Outline

1. Perfect Competition (20)

Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run; Short run and long run supply; market efficiency, economic surplus

2. Imperfect Markets (30)

Monopoly: Equilibrium under monopoly, the multi-plant monopolist; price discriminating monopolist: application to international trade (dumping); Natural monopoly: peak load pricing two-part tariff, Regulation of monopoly and anti-trust policy; government policies towards competition; imperfect competition. Monopolistic competition: group equilibrium, equilibrium with selling costs, excess capacity, welfare issues

3. Input Markets (25)

Labour and land markets –Ricardo's scarcity rent, Modern theory of rent; Marginal productivity theory of labour, marginal revenue product under conditions of imperfect competition; Euler's theorem. Demand for labour; input demand curves; shifts in input demand curves; competitive labour markets; bilateral monopoly; labour markets and public policy; Trade unions, Minimum wages - efficiency considerations; Profit as a residual claim (Concept only)

Readings:

- Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.
- Rubinfeld and Pindyck, Microeconomics, Pearson
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.

INTERMEDIATE MACROECONOMICS – I

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

This course introduces the students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course Outcomes (CO):

CO1: **Understand** the basics of macroeconomic model in terms of aggregate demand and aggregate supply curves.

CO2: **Understand and evaluate** macroeconomic realities and policy responses

CO3: **Analyse** the relative efficacy of fiscal and monetary policies.

Course Outline

Unit 1: Aggregate Demand and Aggregate Supply Curves (28)

Derivation of aggregate demand and aggregate and supply curves; interaction of aggregate demand and supply

Unit 2: Inflation, Unemployment and Expectations (20)

Phillips curve; adaptive and rational expectations; policy ineffectiveness debate

Unit 3: Open Economy Models (27)

Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments

Readings:

Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010

N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010

Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009

Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2nd edition, 1996

Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011

Errol D'Souza, *Macroeconomics*, Pearson Education, 2009

Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012

Core Course 7:
STATISTICAL METHODS FOR ECONOMICS

Paper Code: ECO303C

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

To provide the basics of statistics and its applications in economics

Course Outcomes:

CO1: Understand basic statistical skills essential for economic decision making.

CO2: Develop a strong foundation on Probability Theory

CO3: Analyse variable relationship and prediction using correlation and regression

CO4: Evaluate changes of economic phenomena and compatibility over space and time using Index Numbers.

Course Outline

1. Introduction and Overview (11)

Distinction between Populations and Samples and between population parameters and sample statistics: Sample Vs Complete enumeration; measures of central tendency: arithmetic mean, median, mode and geometric mean(concept only); measures of dispersion: Standard deviation, quartile deviation and mean deviation.

2. Elementary Probability Theory Probability (15)

Meaning and related concepts; sample spaces and events: different approaches to probability: classical approach, statistical approach and axiomatic approach; conditional probability and independence of events; theorems on probability-addition and multiplication (simple numerical problems);

3. Correlation (13)

Correlation: meaning, types, methods of studying correlation: scatter diagram, Karl Pearson's coefficient of correlation; properties of correlation coefficient; Interpretation of correlation; coefficient of determination; rank correlation.

4. Regression (11)

Meaning, linear and non-linear regression (concept only) regression lines, regression coefficients, properties of regression coefficients

5. Time Series Analysis (12)

Time series: meaning, components, fitting of a trend: least square method and moving average method.

6. Index Numbers (13)

Concept of an Index number; Laspeyres', Paasche's and Fisher's Index number; Time reversal, factor reversal and circular tests; Problems in the construction of an index number; Consumer's Price index number-concept and constructions: wholesale Price Index number (concept only), uses of Index number.

Readings:

Jay L. Devore, *Probability and Statistics for Engineers*, Cengage learning, 2010

John E Freund, *Mathematical Statistics*, Prentice Hall, 1992

Richard J Larsen and Morris L. Marx, *An Introduction to Mathematical Statics*.

D. Salvator: *Mathematics and Statistics*, Schaum's Series Tata McGraw Hill.

S.P. Gupta *Statistical Methods*, Sultan Chand and Sons.

S.C. Gupta and V.K. Kapoor, *Fundamentals of Applied Statistics* Sultan Chand and Sons

Murray R Spiegel, Larry J. Stephens(2007), *Schaum's Outline of Statistics* McGraw Hill Professional.

Dominick Salvator, Derrick Reagle(2001) *Schaum's Outline of Statistics and Econometrics*. McGraw Hill Professional

Generic Elective (GE) Course-III
Generic Elective in Economics III: Indian Economy-I

ECO304GE

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

This course familiarizes the students with the evolution and major trends in economic and demographic indicators of the Indian economy.

Course Outcomes (CO)

CO1: Understand the history and evolution of the Indian economy since independence

CO2: Understand and analyse human resource development

CO3: Analyse the pre and post-reform era of the Indian economy with special reference to poverty, unemployment, and inequality

CO4: Evaluate the role of public and private sectors in India's economic growth

Course Outline

Unit1: Economic Development since Independence (20)

Major features of the economy at independence; growth and development under different policy regimes—goals, constraints, institutions, and policy framework; an assessment of performance

Unit 2: Population and Human Development (20)

Demographic trends and features of the Indian population; nature of India's population problems—education, health, malnutrition; dual role of population growth; remedial measures—National Population Policy 2000(latest)

Unit 3: Growth and Distribution (20)

Trends and structure of poverty, inequality, and unemployment: pre and post-reform era; policy measures

Unit 4. Public Sector in the Indian Economy (15)

The rationale; Performance of Central Public Sector Enterprises (CPSEs), reasons and implications; Public sector and 1991 industrial policy; Privatisation

Readings:

- Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
- Himanshu, 2010, —Towards New Poverty Lines for India, *Economic and Political Weekly*, January.
- Jean Dreze and Angus Deaton, 2009, —Food and Nutrition in India: Facts and Interpretations, *Economic and Political Weekly*, February.
- Himanshu. 2011, —Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
- Rama Baru et al, 2010, —Inequities in Access to Health Services in India: Caste, Class and Region, *Economic and Political Weekly*, September.
- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
- Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
- Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*
- Bishwanath Goldar, 2011, Organised Manufacturing Employment: Continuing the Debate, *Economic and Political Weekly*, April.
- Kaushik Basu and A. Maertens, eds, 2013. *The New Oxford Companion to Economics in India*, Oxford University Press.
- P.K. Dhar, 2016- Indian Economy Its Growing Dimensions, Kalyani Publisher.
- I.J. Ahluwalia, Industrial Growth in India: stagnation since Mid-sixties (1985), Oxford University Press.

Skill Enhancement Course (SEC)

Research Methodology for Social Sciences

Paper Code: ECO001S

2 Credits (L+T+P) =2+0+0

Lecture Hours: 30

Course objectives: To familiarize students with the basic concepts of research and how to go about it. The course will enable students to formulate research problems, construct the design and execute the research. Students will also learn how to prepare the report and present it in the process.

Course outcomes:

CO1: **Understand** different types of research

CO2: **Apply** research problem in real life

CO3: **Understand** the research design

CO4: **Understand** the process of data collection

CO4: Develop **skill** with regard to writing research report and present it in proper way

Unit - 1: Meaning and types of research (06)

Meaning, Research methods versus methodology; Types of research- Descriptive vs. Analytical, Applied vs. Fundamental, Conceptual vs. Empirical; Quantitative, qualitative, mixed methods of research.

Unit - 2: The research process- steps in formulating a research problem (07)

Formulation of research problem in qualitative research, Formulation of objectives and hypothesis; types of hypothesis; Data Collection and Sampling - Types of sampling, Determination of the size of sample, sampling procedure, Choice of Sampling Technique

Unit - 3: Research Design (07)

Meaning and feature of good research design; Types of research design -exploratory research design- descriptive and diagnostic research design; hypothesis-testing

Unit - 4: Data collection and preparation (05)

Experiment and survey; collection of primary data; collection of secondary data; case study method; steps in data preparation;

Unit -5: Report Writing and Presentation (05)

Structure and Components of Research Reports - Characteristics of a good report - Framework of a Report - Parts of a Research Report; Format and Presentation of a Report.

Recommended Readings:

Bhandarkar, P.L. and T.S. Wilkinson, *Methodology And Techniques Of Social Research*. Himalaya Publishing

Kothari, C.R., *Research Methodology: Methods and Techniques*, New Age International

Druckman, Daniel, *Doing Research*, Sage

UG SEMESTER IV

Course	Paper Title	Credits (L+T+P)
ECO401C	Intermediate Microeconomics-II	5+1+0
ECO402C	Intermediate Macroeconomics-II	5+1+0
ECO403C	Introductory Econometrics	5+1+0
ECO404GE	Indian Economy-II	5+1+0
ECO002S	An Introduction to Survey Research	2+0+0

Economics Core Course 8
INTERMEDIATE MICROECONOMICS-II
Paper Code: ECO401C
6 credits (L+T+P): 5+1+0
Lecture Hours: 75

Course Objective

This course imparts knowledge about the fundamental of general equilibrium analysis. It also familiarizes students about oligopoly markets and about the application of various models therein and apprises students about strategic decision making possible with the use of game theory.

Course Outcomes (CO):

- CO1: Understand** the concepts of general equilibrium and welfare analysis and its implications for society.
- CO2: Understand and apply** the strategic considerations under oligopoly market conditions and their use in economic decision making.
- CO3: Understand and analyse** game theory and identification of optimal strategies under non-cooperative market conditions.
- CO4: Evaluate** and assess market inefficiency induced by externalities and asymmetric information.

Course Outline

Unit 1: General Equilibrium Analysis (30)

General equilibrium analysis; Equilibrium and efficiency under pure exchange and production; Equity and efficiency; the efficiency of competitive markets; Existence, uniqueness and stability of equilibrium; Walras law; tâtonnement, production and exchange; numeraire and money;

Welfare economics: Criteria of Social Welfare (concepts only), social welfare function and the theory of second best

Unit 2: Imperfect markets and game theory (25)

Oligopoly: collusive oligopoly: cartels and price leadership models: Non-collusive oligopoly: the Cournot model; Game theory: competitive strategy, normal form games, dominant, dominated, mixed strategies, prisoner's dilemma, Nash equilibrium.

Unit 3: Market Failure (20)

Externalities- external effects on consumption and production, public goods and markets with asymmetrical information, Lindahl equilibrium

Readings:

- Henderson and Quandt,, *Microeconomic Theory: A Mathematical Approach*, McGraw-Hill Inc.
- Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, 8th Edition, W.W. Norton and Company/Affiliated East-West Press (India), 2010.The workbook by Varian and Bergstrom could be used for problems.
- C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.

Economics Core Course 9
INTERMEDIATE MACROECONOMICS-II
Paper Code: ECO402C
6 credits (L+T+P): 5+1+0
Lecture Hours: 75

Course Objective

This course is a sequel to Intermediate Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro-foundations to the various aggregative concepts used in the previous course. The students will move from short run macroeconomics to long term analysis of the same. The wheels of GDP and its growth will be clear by understanding in isolation consumption, investment behavior and the role of fiscal and monetary authorities in it.

Course Outcomes (CO):

- CO1: **Understand** the fundamentals of Keynesian and Neo-Classical growth models as well as an introduction to evolving endogenous growth theory.
- CO2: **Apply** the alternative approaches to consumption behavior that reconciles the empirical findings, the theoretical progression bringing in subjectivity in consumption behavior of a community.
- CO3: **Understand** and **analyse** the various determinants of gross investment, and alternative approaches to the demand for money.
- CO4: **Evaluate** the basics of fiscal and monetary policies and issues that surround the policy decisions.

Course Outline

Unit 1: Economic Growth (15)

Harrod-Domar model; Solow model; golden rule; technological progress and elements of endogenous growth

Unit 2: Microeconomic Foundations (20)

- a. Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; rational expectations and random-walk of consumption expenditure.
- b. Investment: determinants of business fixed investment; residential investment and inventory investment.
- c. Demand for money

Unit 3: Fiscal and Monetary Policy (20)

Active or passive; monetary policy objectives and targets; rules versus discretion: time consistency; the government budget constraint; government debt and Ricardian equivalence.

Unit 4: Schools of Macroeconomic Thoughts (20)

Classicals; Keynesians; New-Classicals and New-Keynesians

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009
4. Charles I. Jones, *Introduction to Economic Growth*, W.W. Norton & Company, 2nd edition, 2002
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011
6. Errol. D'Souza, *Macroeconomics*, Pearson Education, 2009
7. Robert J. Gordon, *Macroeconomics*, Prentice-Hall India Limited, 2011

Core Course 10
INTRODUCTORY ECONOMETRICS

Paper Code: ECO403C

6 credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective

The main objective of the course is to give students idea about application of econometric tools in economic analysis while dealing with dataset

Course Outcomes (CO)

CO1: Understand the basics of econometrics

CO2: Understand the statistical distribution of numerical information

CO3: Apply and **analyse** the simple linear regression in empirical analysis

CO4: Apply the sampling techniques and statistical inference in research

Course Outline

Unit 1: Nature and Scope of Econometrics (10)

Econometrics: Introduction, definition, scope, methodology of econometrics, goals of econometrics; Econometrics and Mathematical Economics; Econometrics and Statistics.

Unit 2: Probability Distribution and Related concepts (12)

Concept of discrete and continuous random variable; mathematical expectation-basic concepts related to discrete random variable; addition and multiplication rule(proofs only), standard probability distribution: Binomial and Poisson Distribution-basic concepts; derivation of probability mass function, derivation of mean and variance (Simple numerical problems) Normal distribution-concepts, properties and uses.

Unit 3: Simple Linear Regression Model (14)

Two variable case Estimation of model by method of ordinary least squares; properties of ordinary least squares; properties of the estimators; Gauss-Markov theorem; Goodness of fit – coefficient of determination and decomposition of the sum of squares.

Unit 4: Statistical concepts- An overview (14)

Sampling techniques: Simple random sampling- with replacement and without replacement; stratified sampling; systematic sampling; sampling errors and non-sampling errors; large samples and small samples; concepts of sampling distribution and standard error of statistics: maximum likelihood method (concept only).

Unit 5: Theory of Estimation and testing of Hypothesis (15)

Characteristics of a good estimator; test of significance: meaning; null hypothesis; alternative hypothesis; point estimation and interval estimation: confidence interval, level of significance, power of a test, one-tailed test, two-tailed test, type-I error and type II error. Large sample test: test of significance for a single mean, test of significance for difference of means. Student's t distribution: definition, properties: test for single mean and test for difference of means.

Unit 6: Violation of Classical Assumptions (10)

Autocorrelation, heteroscedasticity and multicollinearity (concept only)

Readings

- William G. Cochran, Sampling Techniques, Jhon Wiley, 2007
- John E Freund, Mathematical Statistics, Prentice Hall, 1992.
- Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Application, Prentice hall, 2011.
- D.N. Gujarati and D.C. Porter, Essential of Econometrics, McGraw Hill, 4th edition, International Edition, 2009
- Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007.
- Jan Kmenta, Elements of Econometrics, Indian edition, Khosla Publishing House, 2nd edition, 2008.

Generic Elective (GE)-4: Indian Economy-II**Paper Code: ECO404GE****6 credits (L+T+P): 5+1+0****Lecture Hours: 75****Course objective**

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence.

Course Outcomes (CO)

CO1: Understand the role of macroeconomic policies in formulating money supply, trade, investment, and labor regulation in India

CO2: Analyse the policies in shaping the primary, secondary, and tertiary sectors of the Indian economy and assess their performances

CO3: Evaluate the emerging challenges and prospects for the growth of the Indian economy

Course Outline**Unit1: Macroeconomic Policies and Their Impact (18)**

Fiscal Policy; trade and investment policy; financial and monetary policies; labor regulation

Unit 2: Policies and Performance in Agriculture (17)

Role, agricultural performance; Problem and prospects; Agricultural technology, Land reform, credit reform, Price policy, emerging perspectives after reform

Unit3: Policies and Performance in Industry (20)

Industrial environment at independence: Industrial policy of India: Industrial performance and policies after reform. Growth; productivity; diversification of small-scale industries; problem and prospects

Unit4: Trends and Performance in Services (20)

Importance of Service Sector in India, Trends and Performances of some Major Services in India: Tourism, Transport related services, communication services, Real Estate Services and some Business Services.

Readings:

Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in

Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press

Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.

Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.

Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.

A. Ahsan, C. Pages and T. Roy, 2008, —Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, *Globalization, Labour Markets and Inequality in India*, Routledge.

Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*

J. Dennis Rajakumar, 2011, —Size and Growth of Private Corporate Sector in Indian Manufacturing, *Economic and Political Weekly*, April.

Ramesh Chand, 2010, Understanding the Nature and Causes of Food Inflation, *Economic and Political Weekly*, February

Bishwanath Goldar, 2011, Organised Manufacturing Employment: Continuing the Debate, *Economic and Political Weekly*, April.

Kaushik Basu and A. Maertens, eds, 2013. *The New Oxford Companion to Economics in India*, Oxford University Press

P.K. Dhar, 2016- Indian Economy Its Growing Dimensions, Kalyani Publisher.

I.J, Ahluwalia, Industrial Growth in India : stagnation since Mid-sixties (1985), Oxford University Press.

Skill Enhancement Course (SEC)**An introduction to Survey Research****Paper Code: ECO002S****2 credits (L+T+P): 2+0+0****Lecture Hours: 30****Course Objective**

This course bridges the knowledge gap of students who want to know the different techniques of survey research. It acquaints students with the different methods of interview and tools used in survey research. In addition, students will also learn about the techniques of focus group discussion. Participation in this course will enable students to work in projects related to social science.

Course outcomes (CO)

CO1: **Understand** new concepts vital to the understanding of interview methods

CO2: **Analyse** of the different types and methods of survey

Unit 1: Fundamental of survey research (10)

What is a survey; when is a survey best; prerequisites of success of survey research: questions and responses, sample survey and design, planning for data analysis, pilot testing, response rate, reporting results; choice between self administered questionnaire and interview; a survey continuum: from specific to general use; ethical issues; children and survey ethics

Unit 2: Different types of survey methods (8)

Content; defining the terms; selecting information needs; types of survey questions and choice; rating scales

Unit 3: types of survey research (12)

Interviews; focus group discussion; panel survey; telephone survey; mail-in survey and online survey and kiosks survey

Reference:

de Leeuw, E. D., Hox, J. J., & Dillman, D. A. (Eds.). (2008). International Handbook of Survey Methodology. Taylor & Francis Group/Lawrence Erlbaum Associates

Fink, A. (2003). How to Ask Survey Questions. Sage Publications Inc (second edition)

SEMESTER V		
Course	Paper Title	Credits (L+T+P)
ECO501C	Indian Economy-I	5+1+0
ECO502C	Development Economics-I	5+1+0
	Discipline Specific Elective (DSE)-1&2	
ECO503DSE1	Applied Econometrics	5+0+1
ECO504DSE1	Public Economics	5+1+0
ECO505DSE2	Money and Financial Markets	5+1+0

Core Course 11: INDIAN ECONOMY-I**Paper Code: ECO501C****6 Credits (L+T+P): 5+1+0****Lecture Hours: 75****Course objective**

This course reviews major trends in economic and demographic indicators of the Indian economy, with particular emphasis on paradigm shifts and turning points.

Course Outcomes

CO1: Understand the history and evolution of the Indian economy since independence, with acritical analysis of the pre and post-reform era

CO2: Apply and **evaluate** the growth pattern of human resource development and the policy measures

CO3: Understand and **analyse** the working of the agricultural price policy in ensuring food grainprocurement and its distribution to ensure food security

CO4: Evaluate the role of MSME in India's economic growth

Course Outline**1. Economic Development since Independence (20)**

Major features of the economy at independence; planning and performance experience in pre-reforms era-an overview; Reforms in the Indian Economy since 1991- genesis, structure- impact and appraisal; regional contrasts; structural change in national income.

2. Population and Human Development (15)

Demographic trends and issues; education; health and malnutrition: issues and policy measures.

3. Agricultural Price Policy (20)

Agricultural Price Policy; Food management- food procurement policy, price and distribution controls, Public Distribution System (PDS), food subsidy, buffer stock; Food security

4. Micro, Small, and Medium Enterprises (MSEs) (20)

Defining MSEs: MSMED Act, 2006; Role of MSMEs in Indian economy- employment, economic growth; Status and key challenges

Readings:

- Uma Kapila, 2017-18. *Indian Economy: Performance and Policies*.
- Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
- Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
- Rakesh Mohan, 2008. —Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, *Economic and Political Weekly*, May.
- S.L. Shetty, 2007, —India's Savings Performance since the Advent of Planning, in K.L. Krishna and A. Vaidyanathan, editors, *Institutions and Markets in India's Development*.
- Himanshu, 2010, Towards New Poverty Lines for India, *Economic and Political Weekly*, January.
- Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Interpretations, *Economic and Political Weekly*, February.
- Himanshu. 2011, —Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
- Rama Baru et al, 2010, —Inequities in Access to Health Services in India: Caste, Class and Region, *Economic and Political Weekly*, September.
- J.B.G. Tilak, 2007, —Post Elementary Education, Poverty and Development in India, *International Journal of Educational Development*.
- T. Dyson, 2008, —India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, *Indian Economy Since Independence*, 19th edition, Academic Foundation.
- K. James, 2008, —Glorifying Malthus: Current Debate on Demographic Dividend in India, *Economic and Political Weekly*, June.
- Reetika Khera, 2011, —India's Public Distribution System: Utilisation and Impact *Journal of Development Studies*.

- Aniruddha Krishna and Devendra Bajpai, 2011, —Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, *Economic and Political Weekly*, September
 - KaushikBasu and A. Maertens, eds, 2013, *The New Oxford Companion to Economics*, Oxford University Press.
 - B.A. Prakash, (ed), *The Indian Economy Since 1991*, Second Edition, 2012, PEARSON
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Core Course 12: DEVELOPMENT ECONOMICS-I**Paper Code: ECO502C****6 Credits (L+T+P): 5+1+0****Lecture Hours: 75****Course Objective**

A comprehensive understanding of the concepts and theories of development, and the issues of poverty and inequality

Course Outcomes:

CO1: **Understand** the concept and indicators of development

CO2: **Analyse** the fundamental theories of development

CO3: **Analyse** and **evaluate** the concept of inequality its measurement and consequences emphasizing on empirical considerations

Course Outline:**Unit 1: Conceptions of Development (18)**

Meaning and alternative measures of development (HDI, HPI, Gender Index), common indicators of underdevelopment

Unit 2: Theories of Development (20)

Classic theories of development: Rostow, Harrod Domar, Lewis model, Neocolonial, False paradigm, dualistic development thesis and the neoclassical counter revolution.

Unit 3: Inequality and Poverty (17)

Introduction, What is economic inequality?, Measuring economic inequality, Four criteria for inequality measurement, The Lorenz curve, Complete measures of inequality.

Unit 4: Inequality and Development (20)

Inequality, income, and growth, The inverted-U hypothesis, Testing the inverted-U hypothesis, Income and inequality: Uneven and compensatory changes, Inequality, savings, income, and growth, Inequality, political redistribution, and growth.

Readings:

- Debraj Ray, *Development Economics*, Oxford University Press, 2009.
- Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
- Kaushik Basu, *The Oxford Companion to Economics in India*, OUP, 2007.
- Michael P Todaro, *Economic Development in The Third World, Fourth Edition*, Orient Longman, 1991

DISCIPLINE SPECIFIC ELECTIVE (DSE)**ECO503DSE1****APPLIED ECONOMETRICS (Elective-I)****6 Credits (L+T+P): 5+0+1****Lecture Hours: 75****Course objectives**

Understanding of advanced econometric topics, along with an introduction to statistical software for empirical analysis

Course outcomes:

CO1: Understand and **apply** linear regression techniques to analyse empirical data

CO2: Understand the consequences of violations of OLS assumptions

CO3: Apply statistical software for data analysis

Course Outline:**Unit 1: Multiple Linear Regression Models (12)**

Estimation of parameters; properties of OLS estimators; partial regression coefficients; qualitative (dummy) independent variable

Unit 2: Advanced Topics in Regression Analysis (11)

Specification errors: Omission of relevant variables; inclusion of an irrelevant variable;

Distributed Lag Models: meaning with economic examples.

Unit 3: Autocorrelation (11)

Causes, Consequences, detection and remedies (Theoretical Approach)

Unit 4. Heteroscedasticity (13)

Causes, Consequences and remedies (Theoretical Approach).

Unit 5. Multicollinearity (13)

Causes, Consequences and remedies (Theoretical Approach)

Unit 5: Introduction to Econometric Software Package: (15)

STATA/SPSS/R (anyone)

Readings:

- Jeffrey M. Wooldridge, *Econometrics*, CEGAGE learning, India Edition, 2009
- Dimitrios Asteriou and Stephen Hall, *Applied Econometrics: A Modern Approach*, Palgrave Macmillan, 2007
- Damodar N. Gujarati & Sangeetha, *Basic Econometrics*, Tata Mc-Graw Hill Private Limited.

DSE Paper: PUBLIC ECONOMICS (Elective-II)

6 Credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective:

To provide a comprehensive understanding of the public economics along with the basics of India's fiscal system

Course outcomes:

CO1: Understand the basic fiscal functions of the economy

CO2: Understand and **analyse** the different theories of efficient public goods provision

CO3: Evaluate the different aspects and the implications of public debt

CO4: Evaluate the basics of Indian Public finances, including recent tax structures

Course outline

Unit 1: Fiscal functions: (10)

An overview; allocation, distribution and stabilization; notions of equity; Equity and efficiency

Unit 2: Economics of Public Goods: (15)

Definition of public goods- pure and impure public goods; models of efficient allocation: Samuelson, Lindahl, Tiebout; free rider problem; optimal provision through bargaining; provision through voting – majority voting and median voter theorem; Arrow's Impossibility Theorem

Externalities: the problem and its solutions – taxes and other regulations; property rights and the Coase theorem;

Unit 3.Taxation: (15)

Benefit principle and ability to pay; Canons of taxation, Economic effects of taxation; dead weight loss and distortion, equity considerations; tax incidence, optimal taxation (Concept only)

Unit 4.The public debt: (18)

Sources and methods of redemption; public debt: Intra-generational and intergenerational equity considerations; The budget deficit: alternative measures, implications for growth and stabilization; Golden rule: sustainability of public debt

Unit 5: Indian public finances (17)

The tax system - structure and reforms; VAT and GST; fiscal federalism in India: constitutional provisions relating to centre - state financial relations; the finance commission-objectives, functions and overview of the latest report; overview of fiscal aggregates: expenditure, taxes and debt.

Readings: •

- J. Hindriks, G. Myles: *Intermediate Public Economics*, MIT Press, 2006.
- H. Rosen, T. Gayer: *Public Finance*, 9 th ed., McGraw-Hill/Irwin, 2009.
- Joseph E. Stiglitz, *Economics of the Public Sector*, W.W. Norton & Company, 3 rd edition, 2000.
- R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory & Practice*, McGraw Hill Publications, 5 th edition, 1989.
- Report of the latest Finance commission of India
- TOR (Terms of Reference) of the 15th Finance Commission of India
- Economic Survey, Government of India (Latest).
- State Finances: A Study of Budgets, Reserve Bank of India (Latest)

DSE Paper: MONEY AND FINANCIAL MARKETS (Elective-III)**6 Credits (L+T+P): 5+1+0****Lecture Hours: 75****Course objective:**

Understanding the fundamentals of money and banking, as well as the financial system of the country

Course Outcomes:

CO1: **Understand** the conceptual/theoretical and empirical issues of money in an economy

CO2: **Analyse** the functions and role of central bank and commercial banks

CO3: **Evaluate** the basics of financial economics

Course Outline**Unit 1: Money (06)**

Concept, functions, measurement; Multiplier Model of the Money Supply Process

Unit 2: Introducing the Financial System: (15)

Financial Institutions, Markets, Instruments and Financial Innovations

a. Role of financial markets and institutions;

b. Money and capital markets in India: organization, structure and reforms;

Financial System of the Future Resulting from Innovation;

Unit 3: Interest Rates (20)

Determinants of interest rate; from one Interest rate to many; The Role of Term to Maturity in interest rate differentials; The Yield Curve; interest rates in India

Unit 4: Banking System (14)

- a. Balance sheet and portfolio management.
- b. Indian banking system: Changing role and structure; banking sector reforms.

Unit 5: Central Banking and Monetary Policy (20)

Functions, balance sheet; balance sheet of RBI; goals, targets, indicators and instruments of monetary control; Monetary policy framework and current monetary policy in India

Readings

- F. S. Mishkin and S. G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6th edition, 2009
- F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3rd edition, 2009.
- M. R. Baye and D. W. Jansen, *Money, Banking and Financial Markets*, AITBS, 1996
- Rakesh Mohan, *Growth with Financial Stability- Central Banking in an Emerging Market*, Oxford University Press, 2011.
- L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5th edition, 2011
- M. Y. Khan, *Indian Financial System*, Tata McGraw Hill, 7th edition, 2011.
- N. Jadhav, *Monetary Policy, Financial Stability and Central Banking in India*,
- Pathak B. V. *Indian Financial System*, Pearson Education, Singapore; Macmillan, 2006
- Maureen Burton and Bruce Brown: *The Financial System and The Economy*, Fifth Edition, PHI Learning Private Limited, 2009
- R.B.I. – *Report of the Working Group: Money Supply Analytics and Methodology of Compilation*, 1998.
- Dua, P. Monetary policy framework in India. *Ind. Econ. Rev.* **55**, 117–154 (2020). <https://doi.org/10.1007/s41775-020-00085-3>
- R.B.I. Bulletin, Annual Report and Report on Currency and Finance (latest).

	SEMESTER VI	
ECO601C	Indian Economy-II	5+1+0
ECO602C	Development Economics-II	5+1+0
	Discipline Specific Elective (DSE)-3&4	
ECO603DSE3	Financial Economics	5+1+0
ECO604DSE3	Environmental Economics	5+1+0
ECO605DSE4	International Economics	5+1+0
ECO606DSE4	Economy of The Northeast	5+1+0

Core Course 13: INDIAN ECONOMY-II**Paper Code: ECO601C****6 Credits (L+T+P): 5+1+0****Lecture Hours: 75****Course objective**

To familiarize students with the sector-specific policies and their impact in shaping trends in key economic indicators in India. The course also highlights major policy debates and evaluates the Indian empirical evidence.

Course Outcomes:

CO1: Understand the role of macroeconomic policies in formulating money supply, trade, and ensuring price stability

CO2: Analyse the policies in shaping the primary, secondary, and tertiary sectors of the Indian economy and assess their performances

CO3: Evaluate and analyse the recent changes in the Indian economy and identify contemporary challenges

CO4: Understand and apply concepts such as 'Make in India' and start-ups for fostering innovation and attaining self-sufficiency

Course Outline**Unit 1: Macroeconomic Policies (17)**

Fiscal Policy; trade and investment policy; financial and monetary policies

Unit 2: Policies and Performance in Agriculture (20)

New Agricultural strategy; Market infrastructure; crop insurance; agricultural exports and TOT; Pricing and procurement.

Unit 3: Policies and Performance in Industry (18)

Strategic changes in industrial policy; performance since reforms; disinvestment in the public sector- expansion of private and the joint sector; small scale industries; make in India programme and start-ups.

Unit 4: Trends and Performance in Services (20)

Importance; share in employment and national income; trade in services; current challenges

Readings:

- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
- B.N. Goldar and S.C. Aggarwal, 2005, —Trade Liberalisation and Price-Cost Margin in Indian Industries, *The Developing Economics*, September.
- P. Goldberg, A. Khandelwal, N. Pavcnik and P. Topalova, 2009, —Trade Liberalisation and New Imported Inputs, *American Economic Review, Papers and Proceedings*, May.
- Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
- A. Ahsan, C. Pages and T. Roy, 2008, —Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, *Globalization, Labour Markets and Inequality in India*, Routledge. 20
- Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the 'Missing Middle', *Indian Journal of Labour Economics*

- J. Dennis Rajakumar, 2011, —Size and Growth of Private Corporate Sector in Indian Manufacturing, *Economic and Political Weekly*, April.
- Ramesh Chand, 2010, —Understanding the Nature and Causes of Food Inflation, *Economic and Political Weekly*, February
- Bishwanath Goldar, 2011, —Organised Manufacturing Employment: Continuing the Debate, *Economic and Political Weekly*, April.
- KaushikBasu and A. Maertens, eds, 2013, *The New Oxford Companion to Economics in India*, Oxford University Press.

Core Course 14: ECO602C
DEVELOPMENT ECONOMICS-II

6 Credits (L+T+P): 5+1+0

Lecture Hours: 75

Course objective:

In this course, students will be introduced to the basic concept of demographic studies, the debates and the policy options to deal with population growth. They will also be introduced to the idea of how health and education contribute to the development process of an economy.

Course Outcome:

CO1: Understand the basic concepts of demography

CO2: Understand and **analyse** the dynamics of population growth and the policy options

CO3: Evaluate the role of human capital in economic development with special reference to education and health

CO4: Evaluate and assess of the effectiveness of health care facilities

Course outline:

Unit 1: Demographic Concepts (15)

Some Basic Concepts: Birth and Death Rates, Age Distribution, Demographic Transition, Demographic Dividend

Unit 2: The Population Debate and Policy Options (20)

Population Growth is a bane, Population Growth is a boon, the fall out of the debate and Policy Options.

Unit 3: Education and Economic Development (25)

Education and Human Resource; Public Expenditure on Education, Enrolments, and Literacy in developing countries; Economics of Education and Employment: Educational Supply and

Demand, Social versus Private Costs and Benefits; Some Important Issues: Education and Growth; Education, Inequality, and Poverty; Education, Internal Migration and Fertility; Education and rural Development; Education and International Migration; Policy Options

Unit 4: Health and Economic Development (15)

Health Care and Human Resource Development; Cost-Benefit Analysis of Health Care Facilities, Cost-Effective Analysis of Health Care Facilities

Readings

- Debraj Ray, *Development Economics*, Oxford University Press, 2009.
 - Partha Dasgupta, *Economics - A Very Short Introduction*, Oxford University Press, 2007.
 - Michael P Todaro, *Economic Development in the Third World*, Fourth Edition, Orient Longman, 1991
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DSE Paper: FINANCIAL ECONOMICS (Elective IV)**Paper Code: ECO603DSE3****6 Credits (L+T+P): 5+1+0****Lecture Hours: 75**

Course objective: To familiarize students with the analysis of macroeconomic aggregates in presence of money, and introduce to the idea of shadow economy.

Course Outcomes:

CO1: Understand the status of macroeconomic aggregates with price fluctuations

CO2: Understand and **analyse** interest rate determination in the financial market

CO3: Evaluate the issues pertaining to financial services such as insurance

CO4: Apply and **analyse** calculation of financial asset prices in a financial market, both with and without risk and uncertainty

Course outline:**Unit-1: Money, Inflation, Interest (15)**

The price level and Real Output; Inflation and Economic Growth; The relationship between Inflation and Economic Growth; Meaning of Interest Rate; The Time Value of Money; The Real Interest Rate, After Tax Interest Rate;

Unit-2: Market for Loanable Funds (05)

Demand for Loanable Funds, Supply of Loanable Funds, Equilibrium in the Market;

Unit-3: Supply and Demand in Financial Markets (15)

Demand for Fee Based Financial Services, Supply of Fee Based Financial Services, Equilibrium in the Market; Changes in the Equilibrium: Applications to the Insurance Market

Unit-4: Valuation of Financial Assets (20)

Valuation of Debt Instruments: Debt instruments sold on a discount basis, Coupon Bonds and Other Interest Bearing Debt Instruments; Valuation of Stocks: Income Stocks, Growth Stocks; Equilibrium Price and Volume of Financial Asset Transactions The significance of EPS and P/E ratio

Unit-5: Risk, Uncertainty and Portfolio Choice (20)

Uncertainty and Risk: Expected Value, Variance, Risk Preference; Valuing Risky Financial Assets: Default Risk, Liquidity Risk, Interest Rate Risk and Call Risk, The Inflation Premium and Inflation Risk, Tax Risk; Minimising Financial Risk: Diversification, Future Markets, Option Markets

Readings:

- Pathak B. V. Indian Financial System, Pearson Education, Singapore.
- Alexander G J, Sharpe W F & Bailey J V. Fundamentals of Investments Pearson Education, Singapore.
- Madura J. Financial Institutions and Markets, Thomson South Western.
- Gupta, S. B. Monetary Economics: Institutions, Theory and Policy, S Chand & Co, New Delhi.
- M. R. Baye and D. W. Jansen, Money, Banking and Financial Markets, AITBS,1996.
- Maureen Burton and Bruce Brown: The Financial System And The Economy, Fifth Edition, PHI Learning Private Limited, 2009
- Bodie Z, Merton R. C. & Cleeton D. L. Financial Economics. Pearson/ Prentice Hall
- Panday I.M. Financial Management ; Vikas
- Bhole L. M. Financial Institutions and Markets: Structure, Growth & Innovation, Tata McGraw Hill, New Delhi

DSE Paper: ENVIRONMENTAL ECONOMICS (Elective V)

ECO604DSE3

6 Credits (L+T+P): 5+1+0**Lecture Hours: 75****Course objective:**

Students will be introduced to the fundamentals of environmental economics, the issue of market failure for environmental goods, environmental valuation techniques and the international environmental issues. They will also be introduced to the idea of sustainable development and the approaches to it.

Course outcome: -**CO1: Understand** the linkage between the economy and the environment**CO2: Understand** and **evaluate** theoretically the causes of environmental problems**CO3: Analyse** the alternative policy measures to deal with environmental issues**CO4: Develop** adequate understanding of alternative valuation techniques for non-market environmental resources**Course outline****Unit 1: Introduction (15)**

What is environmental economics; Ecological economics versus environmental economics, environment-economy inter-linkages, laws of thermodynamics, concept of limits to growth; Environmental goods and market failure - externalities, public goods and public bad, common property resources, non-convexities, asymmetric information; Property rights and Coase Theorem

Unit 2: The Design and Implementation of Environmental Policy (18)

Overview; Pollutant taxonomy, command and control (CAC) measures and market incentives - Pigovian taxes and effluent fees, tradable permits; choice between taxes and quotas under uncertainty

Unit 3: International Environmental Problems (15)

Trans-boundary environmental problems; Trade and environment: pollution haven hypothesis and the Porter hypothesis

Unit 4: Valuation of the environment (12)

Types of values, rationale and methods of valuation - Contingent Valuation Method, Hedonic Pricing, Travel Cost Method, Averting Expenditure method

Unit 5: Sustainable Development (15)

Concepts; measurement; trade- off between environment and development – the EKC hypothesis; sufficiency and sustainability;

Resource economics: resource taxonomy, exploitation of natural resources, backstop resources, sustainable exploitation, the maximum sustainable yield and economic yield

Readings:

- Tom Tietenberg and Lynne Lewis (latest edition): Environmental and Natural resource economics: The Pearson Series in Economics
- Nick Hanley, Jason F. Shogren and Ben White (1996). Environmental Economics: Theory and Practice (Macmillan texts in economics)
- Charles Kolstad, Intermediate Environmental Economics, Oxford University Press, 2nd edition, 2010
- Robert N. Stavins (ed.), Economics of the Environment: Selected Readings, W.W.Norton, 5 th edition, 2005.
- Roger Perman, Yue Ma, James McGilvray and Michael Common, Natural Resource and Environmental Economics, Pearson Education/Addison Wesley, 3 rd edition, 2003.
- Maureen L. Cropper and Wallace E. Oates, 1992, “Environmental Economics: A Survey”, Journal of Economic Literature, Volume 30, pp. 675-740.

DSE Paper: INTERNATIONAL ECONOMICS (Elective VI)

ECO605DSE4

6 Credits (L+T+P): 5+1+0

Lecture Hours: 75

Course Objective:

A comprehensive introduction to international economics, covering prominent theories, policy issues and institutions

Course Outcomes:

CO1: Understand the traditional core theories of international trade

CO2: Analyse about empirical challenges to traditional theories and exposure to alternative explanations of trade

CO3: Evaluate trade policies with reference to effective gain and world welfare

CO4: Evaluate the issues that dominate the international financial system

Course Outline:

Unit 1: Introduction (08)

International Economics - subject matter, importance; Current international economic problems and challenges;

Unit 2: Theories of International Trade (17)

Comparative Cost Advantage Theory, Heckscher-Ohlin model: Heckscher-Ohlin Theorem, Rybczynski Theorem, Stolper-Samuelson Theorem, Factor Price Equalization Theorem

Unit 3: Alternative Trade Theories and Empirical Testing (18)

Empirical Testing of Ricardian Theory, Leontief Paradox, the Specific Factors Model, Empirical Challenges to Traditional Theories, Alternative Theories: Increasing Returns and International

Trade, Monopolistic Competition and International Trade, Technological Gap and Product Cycle, Intra-Industry Trade

Unit 4: Trade and Commercial Policy (17)

Tariff: Types, Partial and General Equilibrium Analysis of Tariff, Effective Rate of Protection, Tariff and World Welfare; Commercial Policy Instruments: Export Taxes and Subsidies, Quantitative Restrictions, International Cartels, Dumping, Other Non Tariff Barriers

Unit 5: International Macroeconomic Policy (15)

Fixed versus flexible exchange rates; international monetary systems; and financial crises in emerging market economies

Readings:

- Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012
- Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011
- Miltiades Chacholiades, *International Economics*, McGraw-Hill Publishing Company, 1990
- Bo Sodersten, *International Economics*, 2nd Edition, Macmilan Education Limited, 1989

DSE Paper: ECONOMY OF THE NORTHEAST (Elective VII)
(With Special Reference to Assam)

ECO606DSE4

6 Credits (L+T+P): 5+1+0

Course objective

This course reviews major demographic and economic indicators of the North-eastern economy, with particular emphasis on the economic development of Assam.

Course Outcomes (CO)

CO1: Understand the resource potential of North East India

CO2: Understand and analyse the demographic trends and performance evaluation of key indicators of human resource development

CO3: Evaluate the performance in various development sectors and identify the structural challenges

CO4: Create analytical abilities on issues of the key growth sectors of North-eastern economy and its strategic importance for the success of Act East Policy

Course Outline

Module 1: Basic features of the economy of North East India (12)

Natural resources: land, mineral, forests, water; demographic features: population composition, growth rate and trend in post-independence period, density of population, urban rural composition, sex ratio, literacy, life expectancy and infant mortality, occupational distribution of population-inter and intra-regional variation; Assam Population Policy (current).

Module 2: Infrastructure in North East (15)

Road network in Assam, railways in Assam, air transport in Assam, inland water transport in Assam, Communication facilities in Assam

Module 3: Domestic Product (12)

Structure, trend and composition of regional and Assam's domestic product; State budget of Assam

Module 4: Agricultural Development (12)

Agricultural practices in the hills and the plains, trends in area, production and productivity of major crops, cropping pattern; pace of progress and modernization of agriculture: constraints and challenges; transition from shifting cultivation.

Module 5: Development of Banking in Assam (12)

Development of commercial banking in Assam during the post-nationalization era; Adoption of lead bank scheme as an area approach; Setting up of Regional Rural Banks (RRBs), present status; Recent growth of commercial banks in Assam, priority sector advances; Micro finance.

Module 6: Agencies for Development of the North East (12)

DONER, NEC and NEDFi: roles and functions, Impact of special measures in the post 1991 period; emerging areas for future growth of the region: handicraft and handloom sector, tourism and border trade; Act East Policy.

Readings:

- Baishya, P. (1989). *Small and Cottage Industries: A Study in Assam*. New Delhi: Manas Publications.
- Barua, A., France (Eds.). (2005). *India's North-East: developmental issues in a historical perspective*. New Delhi: Manohar Publishers & Distributors.
- Bezbaruah, M. P. (1994). *Technological transformation of agriculture: a study from Assam*. New Delhi: Mittal Publications.
- Brunner, H.-P. (Ed.). (2010). *North East India: local economic development and global markets*. New Delhi ; Thousand Oaks: SAGE Publications.
- Burman, B. K. R. (1989). Problems and Prospects of Tribal Development in North-East India. *Economic and Political Weekly*, Vol. 24(Issue No. 13).
- Chaube, S. K., Munsi, S., & Guha, A. (1975). Regional Development and the National Question in North-East India. *Social Scientist*, 4(1), 40. <https://doi.org/10.2307/3516390>

- Debnath, A. (2012). Structural Change and Inter-sectoral Linkages. *Economic and Political Weekly, Vol. 47*(Issue No. 06).
- Dhar, P. K. (2016). *Economy of Assam* (9th Edition). New Delhi: Kalyani Publishers.
- Dutta, M. K. (2011). *Irrigation potential in agriculture of Assam*. New Delhi: Concept Pub. Co.
- Ganguly, J. B. (2006). *An economic history of North East India, 1826-1947*. New Delhi: Akansha Pub. House.
- Gogoi, P.K. (2019). *The mirror of Assam economy*. Eastern Readers Publication, Guwahati.
- Goswami, A. (1981). Assam s Industrial Development-Urgency of New Direction. *Economic and Political Weekly, Vol. 16*(Issue No. 21).
- Goswami, A. (1984). Tribal Development with Special Reference to North-East India. *Social Scientist, 12*(8), 55. <https://doi.org/10.2307/3520225>
- Goswami, P. (2005). *Indigenous industries of Assam: retrospect and prospect*. Delhi: Anshah Pub. House.
- Goswami, P. C. (1963). *Economic Development of Assam*. London: Asia Publishing House.
- Goyari, P. (2005). Flood Damages and Sustainability of Agriculture in Assam. *Economic and Political Weekly, Vol. 40*(Issue No. 26).
- Guha, A. (2015). *Medieval and early colonial Assam: society, polity, economy*. Guwahati: Anwasha.
- Saikia, A. (2011). Early Twentieth Century Agrarian Assam: A Brief and Preliminary Overview. *Economic and Political Weekly, Vol. 46*(Issue No. 41).
- Sarma, J. N. (1966). Problems of Economic Development in Assam. *Economic and Political Weekly, Vol. 1*(Issue No. 7).
