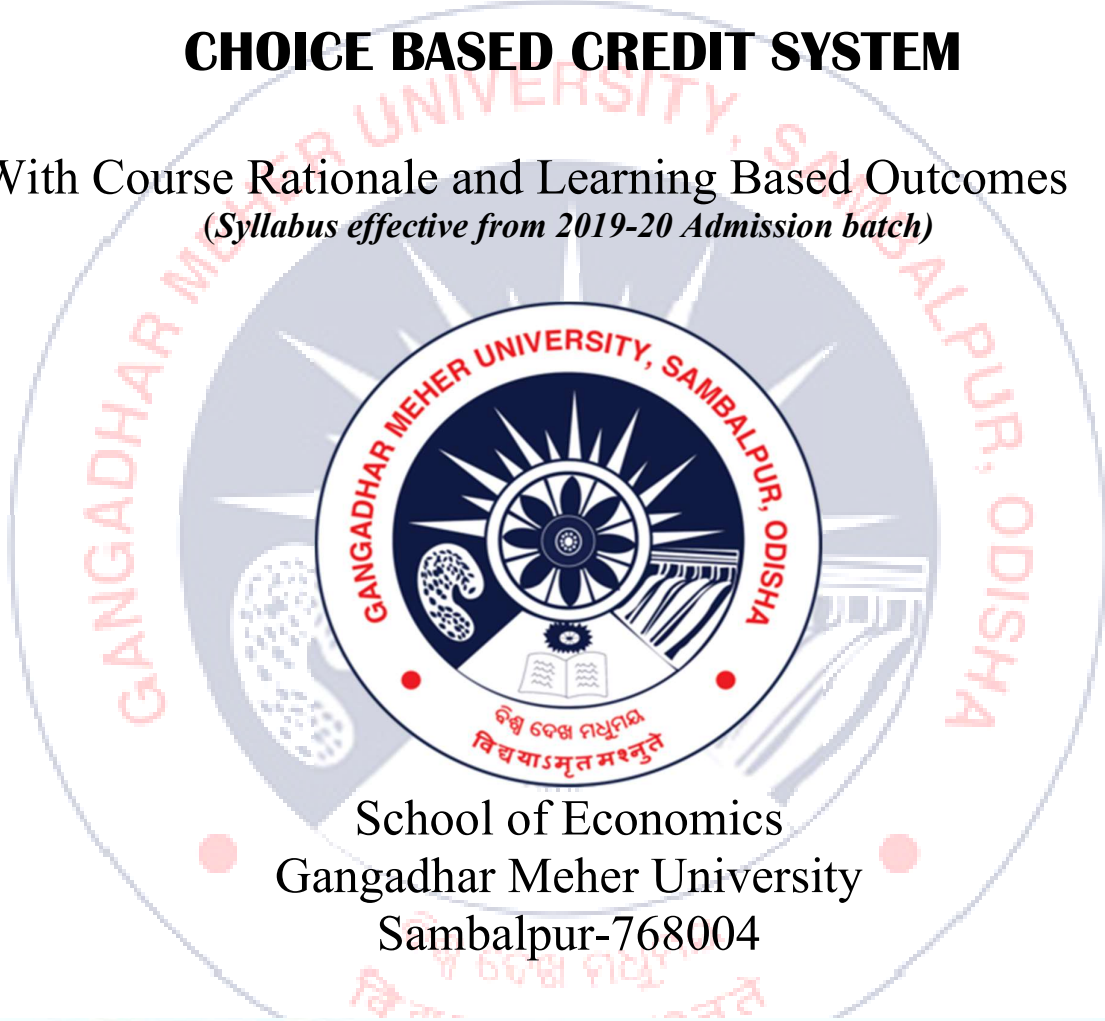


SYLLABUS FOR UNDER GRADUATE
COURSE IN ECONOMICS
(Bachelor of Arts Examination)

**UNDER
CHOICE BASED CREDIT SYSTEM**

With Course Rationale and Learning Based Outcomes
(Syllabus effective from 2019-20 Admission batch)



School of Economics
Gangadhar Meher University
Sambalpur-768004



About the School

School of Economics has been an integral part of the GM University since its inception as a college. However PG course was introduced in the session 1966-67. From the very beginning the department is contributing to the society and the nation through its teaching and research activities. The Department has introduced M.Phil and Ph.D. courses since the academic session 2018-19. The Department has adopted the UGC prescribed CBCS syllabus in toto since the academic session 2015-16. The sanctioned strength of students is 80 for each year at UG Honours level and 48 for each year at PG level. Further in MPhil courses the sanctioned strength of students is 08 and at Post Doctoral level it is 02 (two). On an average students have been maintaining consistently high academic performance. The department has illustrious alumni to its credit who have been involved with the administration of the country at national level. The School has organized a national seminar in March 2016 and an international seminar in February 2017. The School hosts 06 full-time faculty members, 01 Ph.D. student and 08 M.Phil. students. Their research focuses on topics in the areas of Microeconomics, Economic Theory, Agricultural Economics, Political Economy, State Finance, Tribal Development, Behavioural Economics and Financial Economics.

Dr. Pramod Kumar Mishra (IAS), Principal Secretary to The Prime Minister, India; Prof. Sudhansu Sekhar Rath (Former Vice-Chancellor, GMU); Prof. Deepak Ku. Mishra (Professor, JNU), Prof. Jugal Kishore Mohapatra (IAS), Shri Arun Ku. Pujari (IAS) are few proud alumni of the school.

About the Programme

B.A. in Economics under the Choice Based Credit System (CBCS) with Learning Outcomes aims at offering a general framework which enable our students to develop analytical as well as critical thinking skills within Economics. It serves twin goals of responding to the needs of students to grow as competent, self-reflective learners with relevant academic and professional skills and to prepare them as contributors to the growing discipline. This framework is intended to help maintaining the standards of teaching, its periodic review against graduate attributes, qualification descriptors, program learning outcomes and course level learning outcomes. It is viewed in the spirit of innovation in teaching-learning process and adopted according to local conditions, regional priorities, national and global needs along with the availability of the expertise.

Looking at the diversity and complexity of the subject and diversified students' background along with subject dynamism, the curriculum is developed considering various aspects such as: -

- Entry level expectations of students coming from various Board of examination (CBSE/ICSE/CHSE/State Boards) and their socio-economic background
- General expectations from a three-year undergraduate honours training.
- The changing profile of undergraduate students

Keeping the above aspect in mind the proposed learning objectives and outcomes have been adapted to the local, regional and linguistic diversities with the changing academic scenario and conditions. Further, the learning objectives and outcomes have been framed with a projected scope on the basis of the extent of academic facilities available (e.g. availability of faculty and their expertise, resources and opportunities for field training).

Graduate Attributes in Economics

Attributes of Economics graduate under the outcome-based teaching-learning framework may encompass the following:

- **Core competency:** The Economics graduates are expected to know the fundamental concepts of Economics. These fundamental concepts would reflect the latest understanding of the field, and therefore, are dynamic in nature and require frequent and time-bound revisions.
- **Communication skills:** Economics graduates are expected to possess minimum standards of communication skills expected of a graduate in the country. They are expected to read and understand documents with in-depth analyses and logical arguments. Graduates are expected to be well-versed in speaking and communicating their idea/finding/concepts to wider audience.
- **Critical thinking:** Economics graduates are expected to know basics of cognitive biases, mental models, logical fallacies, scientific methodology and constructing cogent scientific arguments.
- **Psychological skills:** Economics Graduates are expected to possess basic psychological skills required to face the world at large, as well as the skills to deal with individuals and students of various sociocultural, economic and educational levels. Psychological skills may include feedback loops, self-compassion, self-reflection, goal-setting, interpersonal relationships, and emotional management.
- **Problem-solving:** Economics Graduates are expected to be equipped with problem-solving approaches that are pertinent across the disciplines.
- **Analytical reasoning:** Economics Graduates are expected to acquire formulate persuasive arguments and spot logical flaws, inconsistencies, circular reasoning etc.
- **Research-skills:** Economics Graduates are expected to be keenly observant about what is going on in the natural surroundings to awake their curiosity. Economics Graduates are expected to identify socio-economic problems and bring out a solution to it at least at policy level.
- **Teamwork:** Economics Graduates are expected to be team players, with productive cooperations involving members from diverse socio-cultural backgrounds.

- **Digital Literacy:** Economics Graduates are expected to be digitally literate for them to enroll and increase their core competency via e-learning resources such as MOOC and other digital tools for lifelong learning. Economics Graduates should be able to spot data fabrication and fake news by applying rational skepticism and analytical reasoning.
- **Moral and ethical awareness:** Economics Graduates are expected to be responsible citizen of India and be aware of moral and ethical baseline of the country and the world. They are expected to define their core ethical virtues good enough to distinguish what construes as illegal and crime in Indian constitution. Emphasis be given on academic and research ethics, including fair Benefit Sharing, Plagiarism, Scientific Misconduct and so on.
- **Leadership readiness:** Economics Graduates are expected to be familiar with decision making process and basic managerial skills to become a better leader. Skills may include defining objective vision and mission, how to become charismatic inspiring leader and so on.

Qualification Descriptors for a Bachelor's Degree Program in Economics

The qualification descriptors for a Bachelor's degree in Economics (Honours) may include following:

- To demonstrate a systematic, extensive and coherent knowledge and understanding of academic fields of study as a whole and its applications and links to disciplinary areas of the study; including critical understanding of the established theories, principles and concepts of a number of advanced and emerging issues in Economics.
- Procedural knowledge that creates different types of professionals in the field of Economics. Further application of knowledge can enhance new ideas on solving social and economic problem.
- Identifying socio-economic related problems, analysis and application of data using appropriate methodologies and applying subject knowledge and skill to solve complex problems with defined solutions.
- Finding opportunity to apply subject-related skill for acquiring jobs and self-employment.
- Applying subject knowledge for sustainable environment friendly green initiatives. Adopting expertise in Economics and solve the problems of environment, ecology, sustainable development, hunger, poverty etc. The Economics graduate should be able to align her/himself with the Sustainable Development Goals.

Programme Outcomes of B.A. programme in Economics

Program Outcomes (POs)

The curriculum and syllabi of B.A. programme in Economics is designed to achieve identified Graduate Attributes (GAs) with following POs.

After successful completion of the program, a student(s) will be able;

- PO1: To understand economic concepts added with quantitative methods of economics. To understand the most recent developments in the principles of economic theory, techniques, econometrics software and its applications for analyzing current economic problems.
- PO2: To understand various economic issues and challenges of Indian economy. To understand the impact of economics in social and environmental contexts, and demonstrate / apply the knowledge for sustainable development. To combine the knowledge of applied economics with multidisciplinary subjects for the solution of complex economic problems.
- PO3: To strengthen the students to find opportunities in public and private sectors, research and educational institutions, non-government organizations and charitable trusts for working on economic and environmental issues
- PO4: To apply ethical principles and commit to professional ethics and responsibilities and norms as an Economist. To work effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary environment.
- PO5: To identify the need for and develop the ability to engage in independent life-long learning in the broad context of rapidly changing of global economic scenario.

Based on the above POs, the students are also expected to achieve the following programme specific outcomes.

PSO No	Programme Specific Outcomes (PSOs) Upon completion of this programme the student will be able :
PSO1 (Advanced Knowledge)	To acquire advanced knowledge of Economics & Development issues of Indian Economy in general and Economy of Odisha in particular.
PSO2 (Practical Ability)	To conduct economic analysis using mathematical and statistical techniques especially by developing questionnaire, collecting primary data through field surveys.
PSO3 (Forecasting changes and Future development)	To forecast the future course of changes and development through their knowledge of policies and programmes of government and development agencies in the larger issues of epistemology in social sciences.
PSO4 (Employability and Entrepreneurship)	To visualize the real world situation and enhance entrepreneurial skills for their self-employment, to improve the general attitudes and living conditions of the masses.
PSO5 (Identify, Evaluate and Analyse)	To apply economic theory for critically analyzing the real national and international problems for a thorough evaluation of economic events and makes them responsible citizens.

Course Code	Course Title	Programme Outcomes					Programme Specific Outcomes				
		1	2	3	4	5	1	2	3	4	5
CC-I	Introductory Microeconomics	✓	✓		✓	✓	✓	✓	✓		✓
CC-II	Mathematical Methods for Economics I	✓	✓	✓	✓		✓	✓	✓	✓	✓
GE-I	Indian Economy I	✓	✓				✓	✓	✓		✓
CC-III	Introductory Macroeconomics	✓	✓	✓	✓	✓	✓	✓	✓		✓
CC-IV	Mathematical Methods for Economics II	✓	✓	✓	✓		✓	✓	✓	✓	✓
GE-II	Indian Economy II	✓	✓				✓	✓	✓		✓
CC-V	Microeconomics I	✓	✓		✓	✓	✓	✓	✓		✓
CC-VI	Macroeconomics I	✓	✓	✓	✓	✓	✓	✓	✓		✓
CC-VII	Statistical Methods for Economics	✓	✓	✓	✓		✓	✓	✓	✓	✓
GE-III	Introductory Microeconomics	✓	✓		✓	✓	✓	✓	✓		✓
CC-VIII	Microeconomics II	✓	✓		✓	✓	✓	✓	✓		✓
CC-IX	Macroeconomics II	✓	✓	✓	✓	✓	✓	✓	✓		✓
CC-X	Research Methodology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
GE-IV	Introductory Macroeconomics	✓	✓	✓	✓	✓	✓	✓	✓		✓
CC-XI	Indian Economy I	✓	✓				✓	✓	✓		✓
CC-XII	Development Economics I	✓	✓			✓	✓	✓			✓
DSE-I	Introductory Econometrics		✓	✓	✓	✓	✓	✓	✓	✓	✓
DSE-II	Public Economics	✓	✓			✓	✓	✓			✓
CC-XIII	Indian Economy II	✓	✓				✓	✓	✓		✓
CC-XIV	Development Economics II	✓	✓			✓	✓	✓			✓
DSE-III	International Economics	✓	✓			✓	✓	✓	✓		✓
DSE-IV	Project	✓	✓		✓		✓	✓	✓	✓	✓

विद्यया ऽमृतमश्नुते

Teaching Learning Process

Teaching and learning is a continuous process which is surrounded by students' attitude to learn & share the knowledge, academic curiosity, reading & practicing, creativity, thinking ability and extending knowledge levels. Therefore, the teaching learning process of the programme focuses on learner-centric pedagogies, and interactive and participatory pedagogies. Planning for teaching constitute a critical dimension. The teaching and learning process revolves around a well-structured and sequenced acquisition of knowledge and skills.

Teaching and learning under this programme involves classroom lectures as well as tutorials. The tutorials allow a closer interaction between the students and the teacher as each student gets individual attention. For a visual and better learning outcomes instructors would use ICT facilities, e-learning platforms and other innovative e-content platforms for student-centric learning methods. As part of participative teaching-learning practices few courses include seminars, presentations and group discussions. To cater the needs of slow and advance learners, special, remedial and peer teaching classes will be encouraged. Apart from these, exposure visits, special lectures by invited experts, workshops, and National/International seminars are to be held to augment knowledge, encourage innovative ideas and expose the students to global academic and research advancement. There is also the provision of mentor-mentee for each class where the mentor can keep track of each student's progress and address her/his individual difficulties. For the experiential learning course on project work is offered (i.e. short-term projects, research projects, assignments and fieldworks), which is the integral components of the programme that enable the students to solve practical problems. The provision of written assignments and projects submitted by students as part of the course, are also to be discussed in special classes. Some courses also have a laboratory component and for each course students will be assigned regular home assignments and will be tested periodically through quizzes and class tests to ensure that they have properly learnt the course material.

Assessment Methods / Evaluation Scheme

Assessment methods and evaluation schemes will be as per the Gangadhar Meher University Examination Rules and Regulation. Each Core, discipline specific electives (DSE) and Generic Electives (GE) papers will have maximum 100 marks with 6 credits whereas Ability Enhancement (AECC) and Skill Enhancement Courses (SEC) will have maximum 50 marks with 4 credits. The value added and add on courses if any will have maximum 50 marks with 2 credits. The distribution of marks for assessment and evaluation is follows:

The distribution of marks for assessment and evaluation is follows:

For 100 Marks Paper

- I. 20 marks will be assessed and evaluated by internal assessment
- II. 80 marks will be assessed and evaluated by end term examination

For 50 Marks Paper

- I. 10 marks will be assessed and evaluated by internal assessment
- II. 40 marks will be assessed and evaluated by end term examination

The internal assessment and evaluation may be done through a continuous process having assignments, class test, review works, writing of term papers, quiz or examination.

The end term examination will be based on written examination for theory paper and the question will be set following Bloom's taxonomy which will cover the entire syllabus of the course.

For the research project paper, the student will submit the project write up and defend his/her project through presentation/Viva-Voce as per the University rule.

Course structure of UG Economics Honours

Semester	Course	Course Name	Credits	Total marks
I	AEC-I	AEC-I	04	100
	C-I	Introductory Microeconomics	06	100
	C-II	Mathematical Methods for Economics I	06	100
	GE-I	Indian Economy	06	100
			22	400
II	AEC-II	AEC-II	04	100
	C-III	Introductory Macroeconomics	06	100
	C-IV	Mathematical Methods for Economics II	06	100
	GE-II	Indian Economy II	06	100
			22	400
III	C-V	Microeconomics I	06	100
	C-VI	Macroeconomics I	06	100
	C-VII	Statistical Methods for Economics	06	100
	GE-III	Introductory Microeconomics	06	100
	SEC-I	SEC-I	04	100
			28	500
IV	C-VIII	Microeconomics II	06	100
	C-IX	Macroeconomics II	06	100
	C-X	Research Methodology	06	100
	GE-IV	Introductory Macroeconomics	06	100
	SEC-II	SEC-II	04	100
			28	500
V	C-XI	Indian Economy I	06	100
	C-XII	Development Economics I	06	100
	DSE-I	1. Economic History of India (1857 -1947)	06	100
	DSE-II	2. Introductory Econometrics 3. Odisha Economy 4. Public Economics 5. Money and Banking	06	100
			24	400
VI	C-XIII	Indian Economy II	06	100
	C-XIV	Development Economics II	06	100
	DSE-III	1. Environmental Economics 2. International Economics 3. Agricultural Economics 4. History of Economic Thought	06	100
	DSE-IV	Project or Dissertation	06	100
			24	100
		Total		2600

Discipline Specific Elective Papers: (Credit: 06 each) (4 papers to be selected by students of Economics Honours): DSE 1-IV

DSE Group I

1. Economic History of India (1857-1947)
2. Introductory Econometrics
3. Odisha Economy
4. Public Economics
5. Money and Banking

DSE Group II

1. Environmental Economics
2. International Economics
3. Agricultural Economics
4. History of Economic Thought
5. Project *Dissertation (can be opted as alternative of DSE-IV only and of 6 credits.
Dissertation content: 50, Seminar: 30, Viva: 20)

ECONOMICS

HONOURS PAPERS:

Core course – 14 papers

Discipline Specific Elective – 4 papers (out of the 6 papers suggested)

Generic Elective for Non Economics students – 4 papers. In case University offers 2 subjects as GE, then papers 1 and 2 will be the GE paper.

Marks per paper - Midterm : 20 marks, End term : 80 marks, Total – 100 marks

Credit per paper – 6

Teaching hours per paper – 50 hours + 10 hours tutorial

Core Paper I: INTRODUCTORY MICROECONOMICS

Introduction:

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Course Objectives:

The course aims at familiarizing the students pertaining to decisions made at individual level by consumers and firms after evaluating resources, costs and trade-offs by the consumers and firms.

Course Outcomes

After successful completion of this course, students will be able to:

- CO1: Understand basic concepts of Microeconomics
- CO2: Recognise nature and of consumer behaviour
- CO3: Classify different market structures
- CO4: Understand the basics of factor pricing.

Unit I: Exploring the Subject Matter of Economics, Markets and Welfare

The Ten Principles of Economics: How people make decisions; Working of the economy as a whole; Thinking Like an Economist: The economist as Scientist – The scientific method: Observation, Theory and more observation; Role of Assumptions; Economic Models; Why economists disagree; Graphs in Economics

The Market Forces; Markets and Competition; The Demand and Supply curves – Market vs Individual curves, Shifts in Demand and Supply Curves; Market Equilibrium and changes there in; Price Elasticity of Demand – determinants and computation; Income and Cross Elasticity of Demand; The Price Elasticity of Supply – determinants and computation; Consumer and Producer Surplus.

Unit II: Theory of Consumer Choice

The Budget Constraint; Preferences – representing preferences with indifference curves; Properties of Indifference Curves; Two extreme examples of indifference curves; Optimization – Equilibrium; Change in equilibrium due to changes in income, changes in price; Income and Substitution Effect; Derivation of Demand Curve; Three applications – Demand for Giffen goods, Wages and Labour Supply, Interest rate and Household saving.

Unit III: The Firm and Market Structures

Cost concepts; Production and Costs; The various measures of cost – Fixed and Variable cost, Average and Marginal cost; Cost curves and their shapes; Costs in the short run and in the long run; Economies and diseconomies of scale. Firms in Competitive Markets – What is a competitive market; Profit maximization and the competitive firm's supply curve; The marginal cost curve and the firm's supply decision; Firm's short-run decision to shut down; Firm's long-run decision to exit or enter a market; The supply curve in a competitive market – short run and long run

Unit IV: The Input Markets

The Demand for Labour – The production function and the marginal product of labour; Value of the marginal product of labour and demand for labour; Shifts in labour demand curve; The supply

of labour – the trade-off between work and leisure; Shifts in the labour supply curve; Equilibrium in the Labour Market; Other factors of production: Land and Capital; Linkages among factors of production.

Text Book:

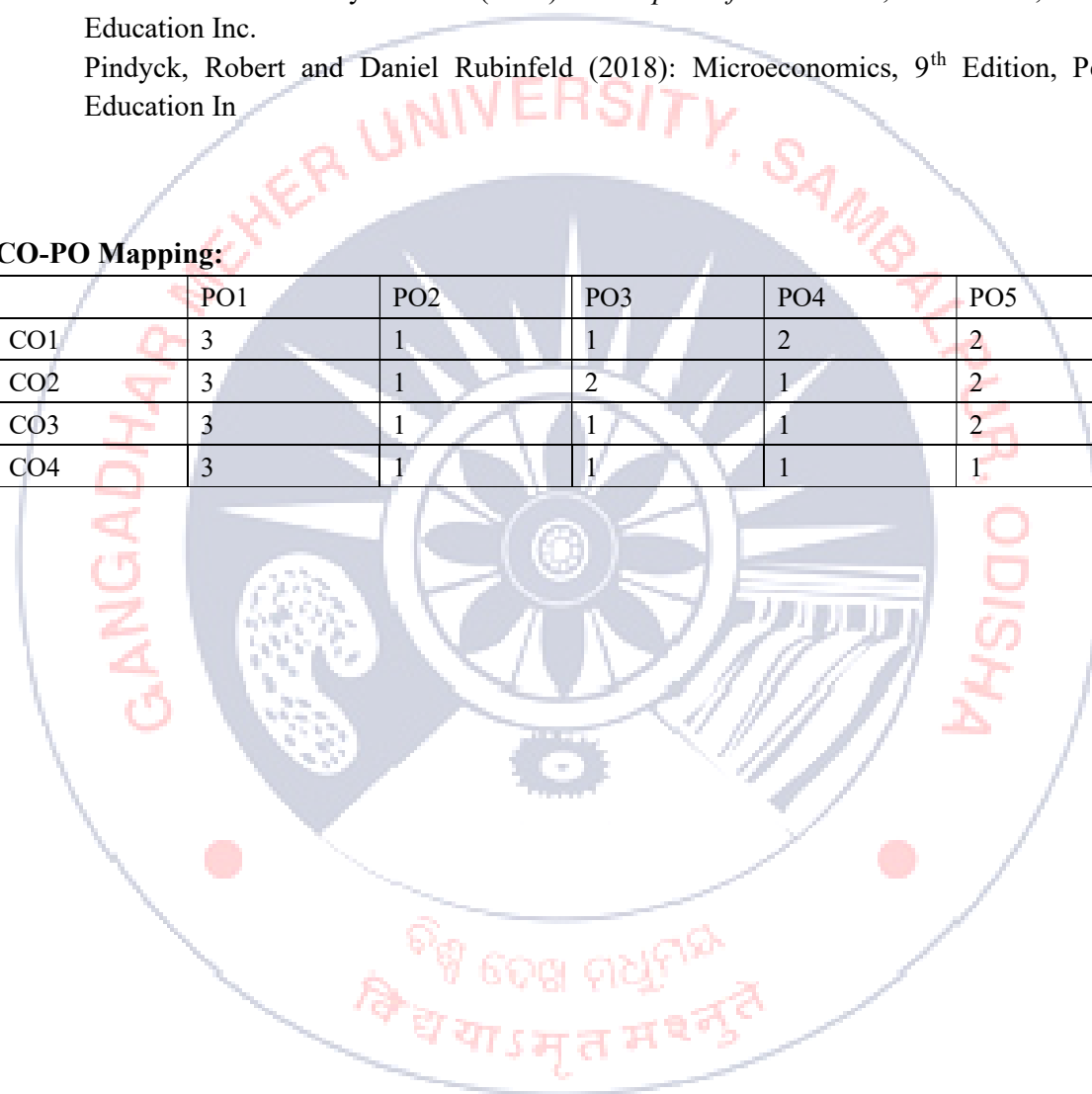
- Principles of Economics, Gregory N Mankiw, 6e Cengage Learning India Private Limited, New Delhi

Reference Book:

- Karl E. Case and Ray C. Fair (2007): *Principles of Economics*, 8th Edition, Pearson Education Inc.
- Pindyck, Robert and Daniel Rubinfeld (2018): *Microeconomics*, 9th Edition, Pearson Education In

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	1	2	2
CO2	3	1	2	1	2
CO3	3	1	1	1	2
CO4	3	1	1	1	1



Core Paper II: MATHEMATICAL METHODS FOR ECONOMICS I

Introduction:

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. 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. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course Objective:

The course aims at familiarizing the students with mathematical applications in economic analysis. Basically the course introduces mathematical tools used in economics to understand and represent decisions-making at individual level by consumers and firms.

Course Outcomes

After successful completion of this course, students will be able to:

- CO1: Understand basic concepts of Mathematics.
- CO2: Understand various concepts of sets, relations, functions, linear algebra, sequence and time
- CO3: Apply various concepts of sets, relations, functions, linear algebra, sequence and time for applied economic analysis.
- CO4: Develop the ability to construct some basic mathematical model for analysis of economic theory.

Unit I: Preliminaries and Functions of one Real Variable

Sets and set operations; Cartesian product; relations; functions and their properties; Number systems

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

Unit II: Derivative of a Function

Rate of change and derivative; Derivative and slope of a curve; Continuity and differentiability of a function; Rules of differentiation for a function of one variable; Application- Relationship between total, average and marginal functions

Unit III: Functions of two or more Independent Variables

Partial differentiation techniques; Geometric interpretation of partial derivatives; Partial derivatives in Economics; Elasticity of a function – demand and cost elasticity, cross and partial elasticity

Unit IV: Matrices and Determinants

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

Text Book:

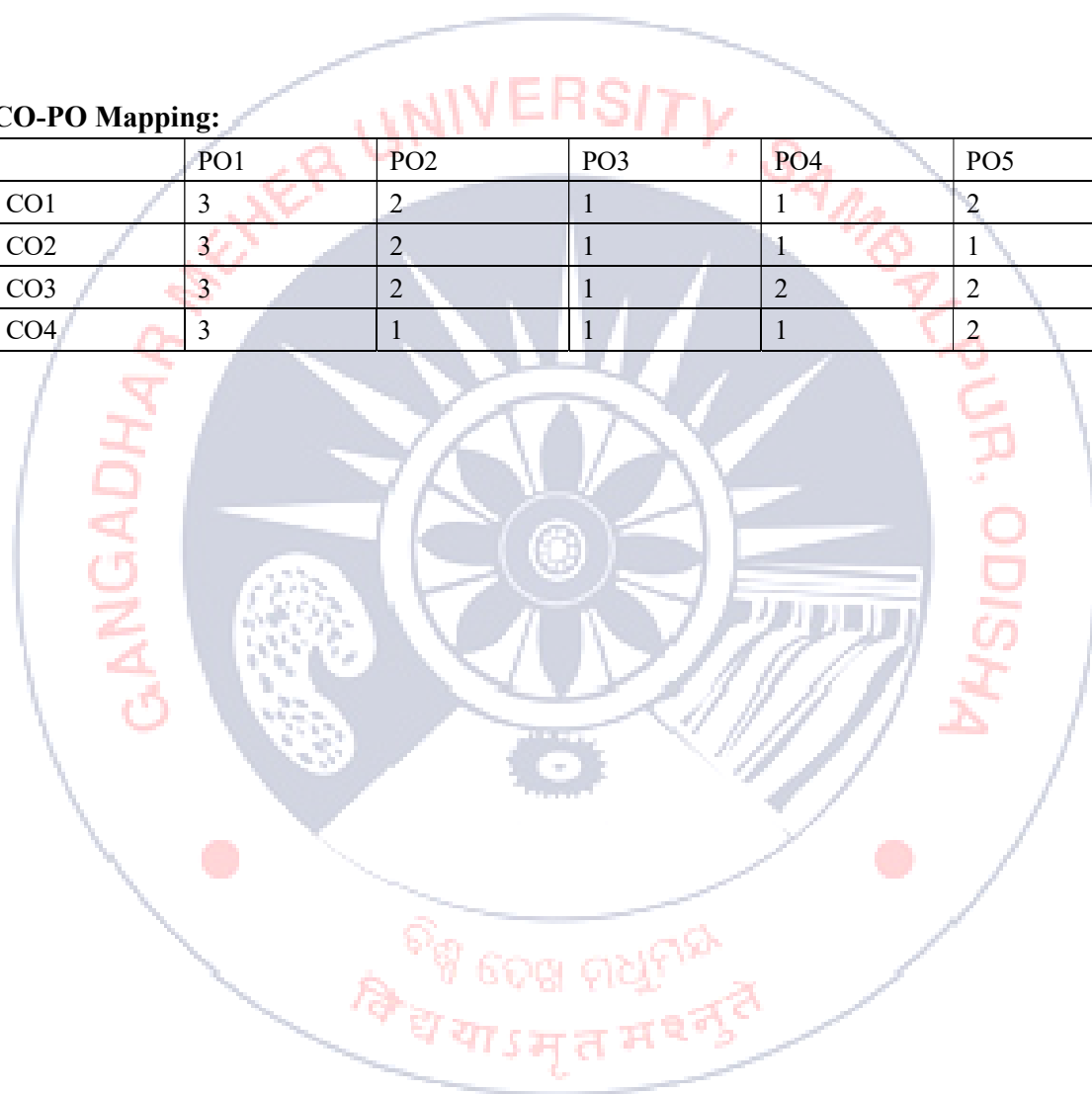
- A. C. Chiang and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.

Reference Book:

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

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	1	1	2
CO2	3	2	1	1	1
CO3	3	2	1	2	2
CO4	3	1	1	1	2



Core Paper III: INTRODUCTORY MACROECONOMICS

Introduction:

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 Objectives:

This course aims at imparting knowledge to the students about how the economy behaves at the aggregate level and how national income is measured and determined. Topics include an overview of macroeconomics including causes of its emergence, major macro-economic concerns, measuring gross domestic product, inflation etc. It will enable the students to develop a critical insight on classical and Keynesian macro-economic models.

Course Outcomes:

After successful completion of this course, students will be able to:

- CO1: Understand basic concepts of macroeconomics.
- CO2: Understand various concepts of national income, consumption functions, investment function, monetary policies and fiscal policies.
- CO3: Articulate basic macroeconomic model for analysis of economic theory.
- CO4: Compare and contrast different paradigms of macroeconomics.

Unit I: Basic Concepts in Macroeconomics

Macro vs. Micro Economics; Limitations of Macroeconomics; Stock and Flow variables, Equilibrium and Disequilibrium, Partial and General Equilibrium Statics – Comparative Statics and Dynamics; National Income Concepts – GDP, GNP, NDP and NNP at market price, factor cost, real and nominal; Disposable personal Income;

Unit II: Measurement of Macroeconomic Variables

Output, Income and Expenditure Approaches; Difficulties of Estimating National Income; National Income Identities in a simple 2-sector economy and with government and foreign trade sectors; Circular Flows of Income in 2, 3 and 4-sector economies; National Income and Economic Welfare; Green Accounting.

Unit III: Money and Changes in its Value

Evolution and Functions of Money, Quantity Theory of Money – Cash Transactions, Cash Balances and Keynesian Approaches, Value of Money and Index Number of Prices
Inflation – Meaning, Causes, and Anti-Inflationary Measures; Classical, Keynesian, Monetarist and Modern Theories of Inflation, Inflationary Gap, Deflation- Meaning, Causes, and Anti-Deflationary Measurers, Depression and Stagflation; Inflation vs. Deflation

Unit IV: Determination of National Income

The Classical Approach - Say's Law, Theory of Determination of Income and Employment with and without saving and Investment; Basics of Aggregate Demand and Aggregate Supply and Consumption- Saving – Investment Functions, The Keynesian Approach – Basics of Aggregate Demand and Aggregate Supply and Consumption, Saving, Investment Functions; The Principle

of Effective Demand; Income Determination in a Simple 2-Sector Model; Changes in Aggregate Demand and Income- The Simple Investment Multiplier

Text Book:

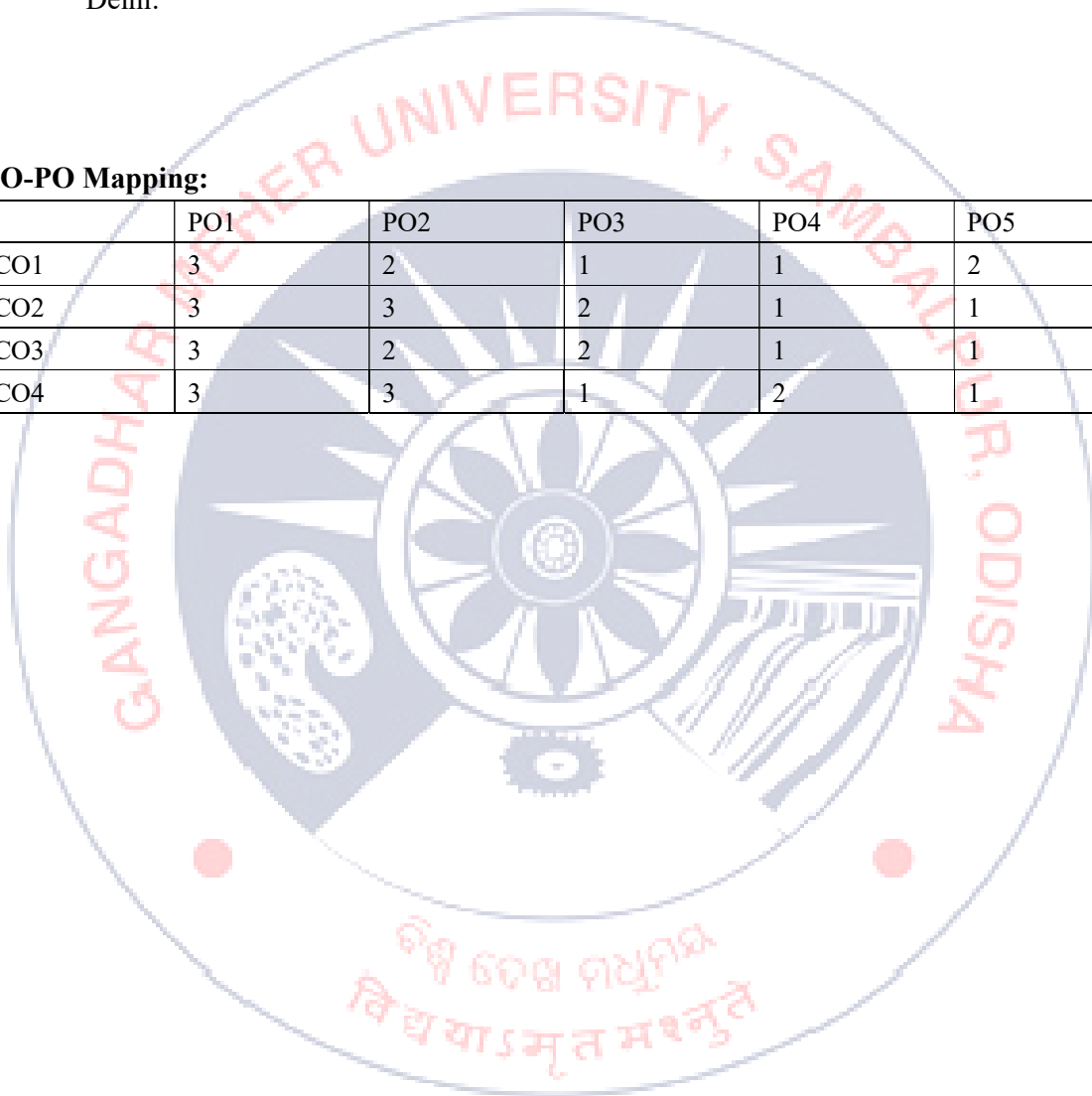
- N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:

- Richard T. Froyen (2005): *Macroeconomics*, 2nd Edition, Pearson Education Asia, New Delhi.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	1	1	2
CO2	3	3	2	1	1
CO3	3	2	2	1	1
CO4	3	3	1	2	1



Core Paper IV: MATHEMATICAL METHODS FOR ECONOMICS II

Introduction:

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. 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. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course Objective:

The course aims at familiarizing the students with mathematical applications in economic analysis. Basically the course introduces mathematical tools used in economics to understand and represent decisions-making at individual level by consumers and firms.

Course Outcomes:

After successful completion of this course, students will be able to:

- CO1: Relate the use of linear algebra in economic analysis.
- CO2: Understand basic concepts of differential calculus and integral calculus which are highly required in Economics.
- CO3: Focus on the mathematical methods and models that are required to understand consumer behaviour.
- CO4: Use mathematical tools to understand optimisation by the consumer.

Unit I: Linear models:

Input- Output Model: Basic concepts and structure of Leontief's open and static Input-Output model; Solution for equilibrium output in a three industry model; The closed model

Unit II: Second and Higher Order Derivatives and Integration:

Technique of higher order differentiation; Interpretation of second derivative; Second order derivative and curvature of a function; Concavity and convexity of functions; Points of inflection, Derivative of Implicit Function; Higher Order Partial Derivative
Indefinite Integrals; Rules of Integration; Techniques of Integration: Substitution Rule, Integration by parts, and Partial Fractions; Definite Integral – Area Interpretation

Unit III: Single and Multivariable Optimization:

Optimum values and extreme values; Relative maximum and minimum; Necessary versus sufficient conditions - First and Second derivative tests (using Hessian Determinants); Economic applications thereof, First and second order condition for extrema of multivariable functions; Convex functions and convex sets

Unit IV: Optimization with Equality Constraints:

Effects of a constraint; Finding stationary value – Lagrange-Multiplier method (Two variable single constraint case only): First and second order condition; The Bordered Hessian determinant

Text Book:

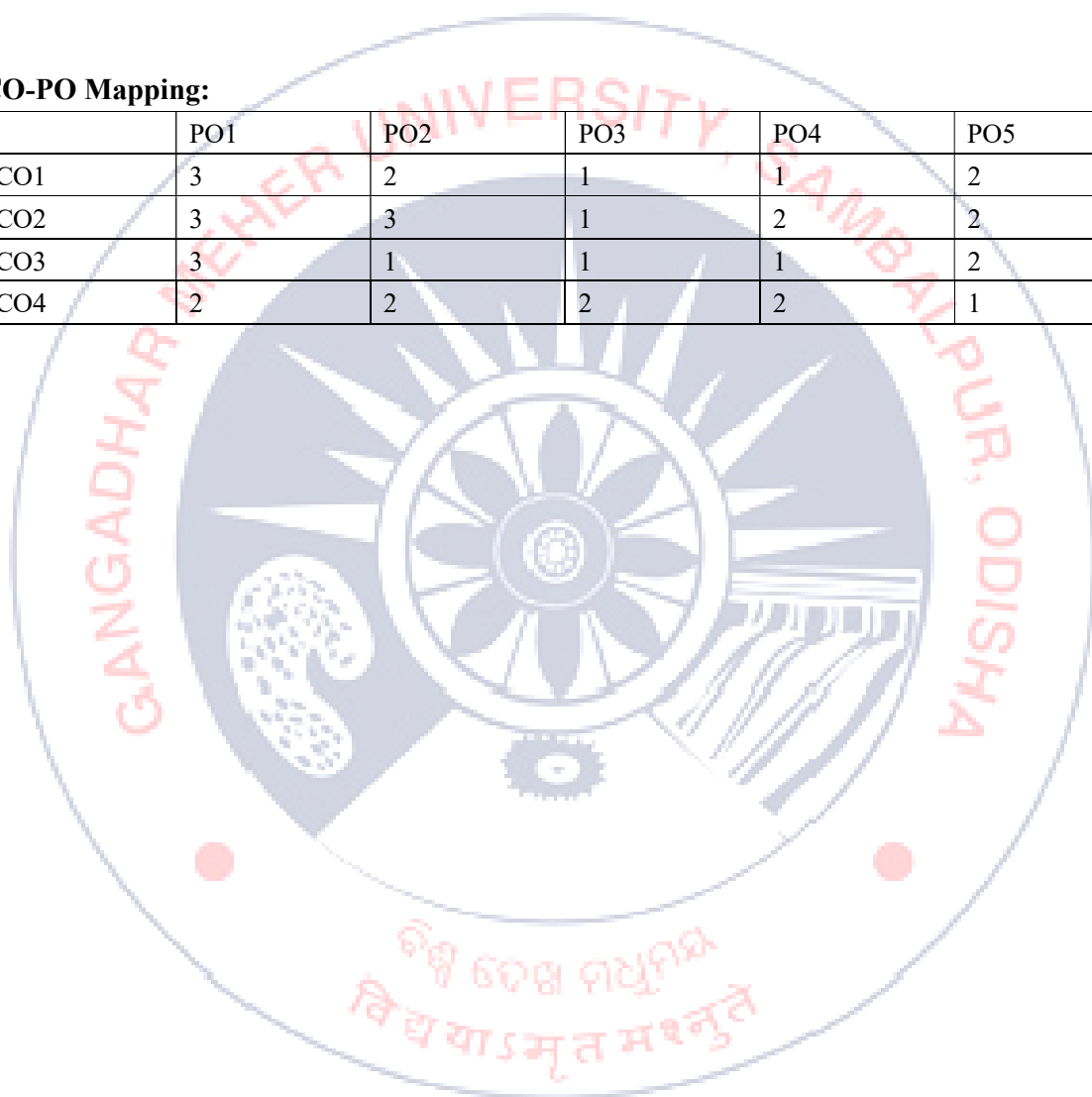
- A. C. Chiang and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.

Reference Book:

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

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	1	1	2
CO2	3	3	1	2	2
CO3	3	1	1	1	2
CO4	2	2	2	2	1



Core Paper V: MICROECONOMICS I

Introduction:

The course is designed to provide a sound training in microeconomic theory to formally analyze the behavior of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts; this course looks at the behavior of the consumer and the producer and also covers the behavior of a competitive firm.

Course Objective:

The course aims at familiarizing the students pertaining to decisions made at individual level by consumers and firms. The course introduces some advancements in consumer behaviour to the students. At the same time, the course aims to introduce the maximising behaviour of the firm.

Course Outcomes:

After successful completion of the course, the student will be able to:

- CO1: Understand the basics of consumer behavior.
- CO2: Apply and demonstrate consumer behavior in graph and mathematical equations.
- CO3: Explain the production process and solve problems related to it.
- CO4: Present the basics of firm's problem.

Unit I: Consumer Theory I

Preferences and Utility, Axioms of Rational Choice, Utility, Trades and Substitutions, Indifference curves; Mathematics of Indifference curves, Utility functions for specific preferences, the many good case; Utility Maximization and choice: the 2-good case (graphical analysis), the n-good case, Indirect utility function, the Lump sum principle, Expenditure minimization, properties of expenditure function

Unit II: Consumer Theory II

The Income and Substitution Effects: Demand function, changes in income, changes in a goods price- Direct and Indirect Approaches (Slutsky), the Individual's Demand Curve, Compensated (Hicksian) demand curves and functions, demand elasticity, Consumer Surplus, Demand relationships among goods, the 2-good case, substitutes and complements, Net (Hicksian) substitutes, and Complements, Substitutability with many goods

Unit III: Production Theory and Costs

Production Functions: Marginal productivity, Production with One Variable Input (labour) and with Two-Variable Inputs, Isoquant Maps and the Rate of Technical Substitution, Returns to Scale, Elasticity of Substitution, Some Simple Production Functions: Linear, Fixed Proportions, Cobb- Douglas; Technical Progress

Definition of Cost and its properties, Cost minimizing input choices (Optimization principles, Expansion Path), Cost Functions and Shift in Cost Curves, Long-Run versus Short-Run Cost Curves

Unit IV: Profit Maximization

The Nature and Behavior of Firms, Marginal Revenue – Relationship between Average and

marginal revenue, Short-Run Supply by a Price-Taking Firm, Profit Functions and its Properties, Profit maximization – General conditions, Input demands

Text Book:

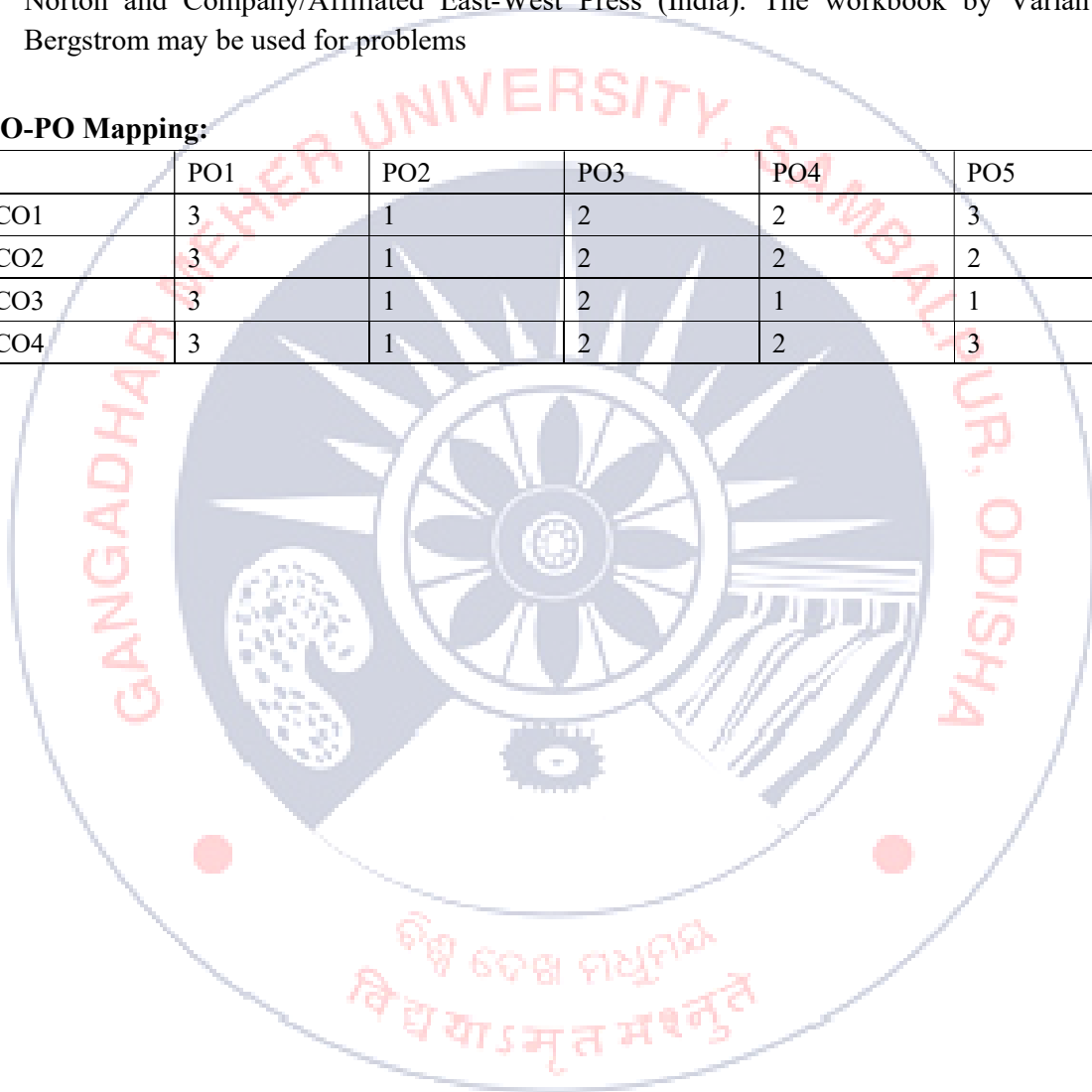
- C. Snyder and W. Nicholson (2012): Microeconomic Theory: Basic Principles and Extensions, 11th Edition, Cengage Learning, Delhi, India

Reference Books:

- H. R. Varian (2010): Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W. Norton and Company/Affiliated East-West Press (India). The workbook by Varian and Bergstrom may be used for problems

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	2	2	3
CO2	3	1	2	2	2
CO3	3	1	2	1	1
CO4	3	1	2	2	3



Core Paper VI: MACROECONOMICS I

Introduction:

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 Objectives: The main objective of this course is to introduce students to Macro economic theory and to prepare them for more advanced courses. The students will be given in depth knowledge of the recent developments in the Macro economic theory.

Course Outcomes:

After successful completion of this course, students shall be able to:

CO1: Familiarize themselves with the generally accepted principles of macroeconomics.

CO2: Learn various policy making tools to fit into particular macroeconomic situation.

CO3: Interpret the macroeconomic equilibrium and policy instruments.

CO4: Learn Business cycle, inflation, unemployment to understand the working of economy better.

Unit I: Consumption and Investment

Consumption – Income Relationship, Propensities to Consume and the Fundamental Psychological Law of Consumption; Implications of Keynesian Consumption Function; Factors Influencing Consumption Function; Measures to Raise Consumption Function; Absolute, Relative, Permanent and Life – Cycle Hypotheses

Autonomous and Induced Investment, Residential and Inventory Investment, Determinants of Business Fixed Investment, Decision to Invest and MEC, Accelerator and MEI, Theories of Investment.

Unit II: Demand for and Supply of Money

Demand for Money – Classical, Neoclassical and Keynesian Approaches, The Keynesian Liquidity Trap and its Implications, Supply of Money, The Theory of Money Supply Determination and Money Multiplier, Measures of Money Supply in India

Unit III: Aggregate Demand and Aggregate Supply

Derivation of Aggregate Demand and Aggregate Supply Curves in the IS-LM Framework; Nature and Shape of IS and LM curves; Interaction of IS and LM curves and Determination of Employment, Output, Prices and Investment; Changes in IS and LM curves and their Implications for Equilibrium

Unit IV: Inflation, Unemployment and Expectations, and Trade Cycles

Inflation – Unemployment Trade off and the Phillips Curve – Short run and Long run Analysis; Adaptive and Rational Expectations; The Policy Ineffectiveness Debate; Meaning and Characteristics of Trade Cycles; Hawtrey's Monetary Theory, Hayek's Over-investment Theory and Keynes' views on Trade Cycles

Text Book:

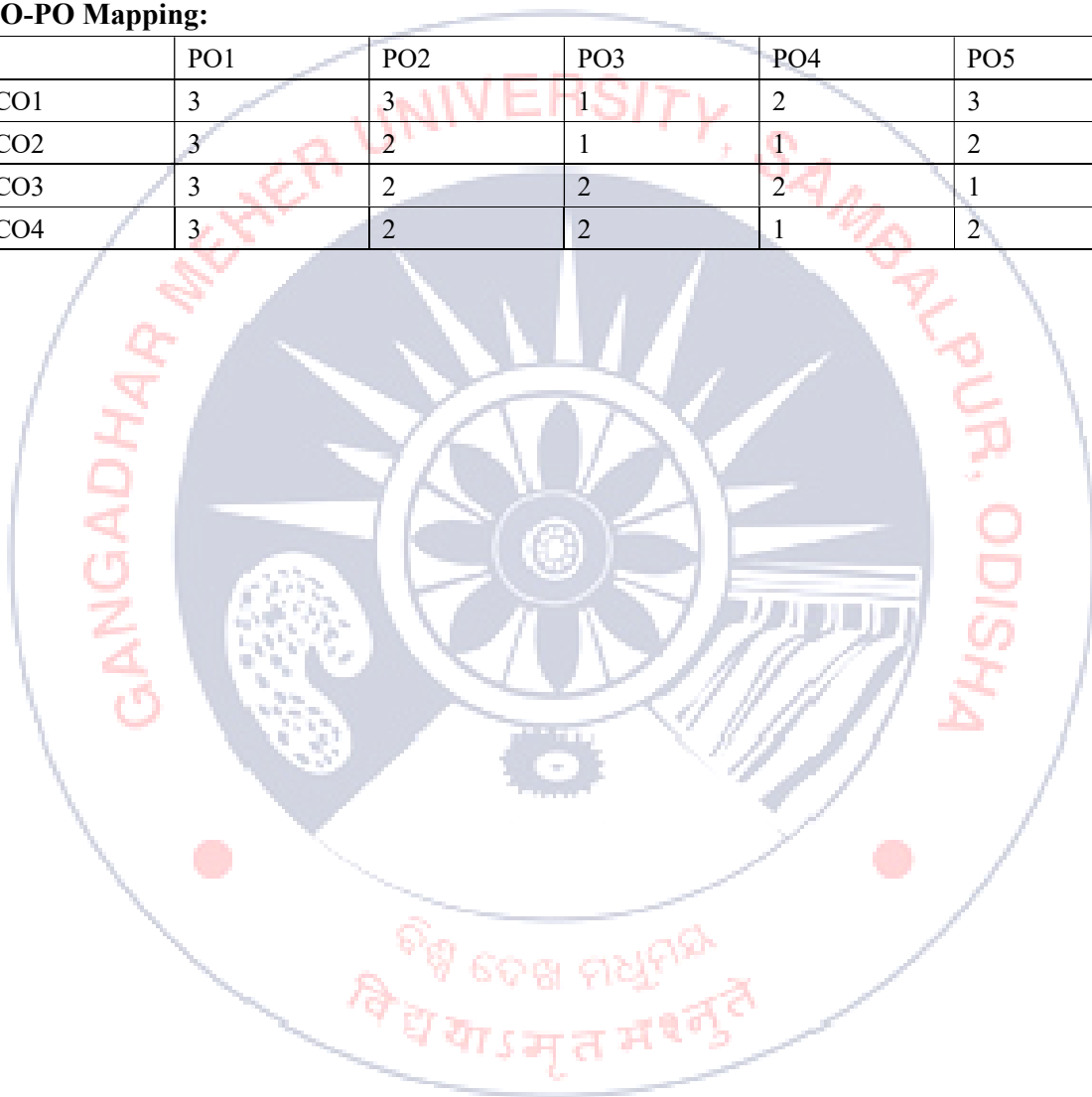
- N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:

- Richard T. Froyen (2005): *Macroeconomics*, 2nd Edition, Pearson Education Asia, New Delhi.

CO-PO Mapping:

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CO1	3	3	1	2	3
CO2	3	2	1	1	2
CO3	3	2	2	2	1
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Core Paper VII: STATISTICAL METHODS FOR ECONOMICS

Introduction:

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It is followed by a study and measure of relationship between variables, which are the core of economic analysis. This is followed by a basic discussion on index numbers and time series. The paper finally develops the notion of probability, followed by probability distributions of discrete and continuous random variables and introduces the most frequently used theoretical distribution, the Normal distribution.

Course Objectives:

The course aims at making students understand the applications of statistical methods for data analysis and help them in learning critical thinking. The course also introduce different sampling methods for data collection

Course Outcomes:

After successful completion of this course, students shall be able to:

- CO1: Get familiar with various concepts of averages and sampling techniques that are helpful in carrying out research work.
- CO2: Apply the statistical concepts for analyzing the data and find the solutions of many day to day problems.
- CO3: Compare the inter-temporal changes by using index numbers.
- CO4: Acquaint with the concept of probability, the only technique, to deal with many uncertain situations in life.

Unit I: Data Collection and Measures of Central Tendency and Dispersion

Basic concepts: population and sample, parameter and statistic; Data Collection: primary and secondary data, methods of collection of primary data; Presentation of Data: frequency distribution; cumulative frequency; graphic and diagrammatic representation of data; Measures of Central Tendency: mean, median, mode, geometric mean, harmonic mean, their relative merits and demerits; Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits; Measures of skewness and kurtosis.

Unit II: Correlation and Regression Analysis

Correlation: scatter diagram, sample correlation coefficient - Karl Pearson's correlation coefficient and its properties, probable error of correlation coefficient, Spearman's rank correlation coefficient. Two variable linear regression analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation and properties, standard error of estimate

Unit III: Time Series and Index Number

Time Series: definition and components, measurement of trend- free hand method, methods of semi-average, moving average and method of least squares (equations of first and second degree only), measurement of seasonal component; Index Numbers: Concept, price relative, quantity relative and value relative; Laspeyer's and Fisher's index, family budget method, problems in construction and limitations of index numbers, test for ideal index number.

Unit IV: Probability Theory and Sampling

Probability: Basic concepts, addition and multiplication rules, conditional probability; Meaning of Sampling, Types of Sampling: Probability Sampling versus Non-Probability Sampling; Simple Random Sampling and its selection, Systematic Sampling, Multi-stage Sampling, Quota Sampling; Error: Sampling and Non-sampling

Text books:

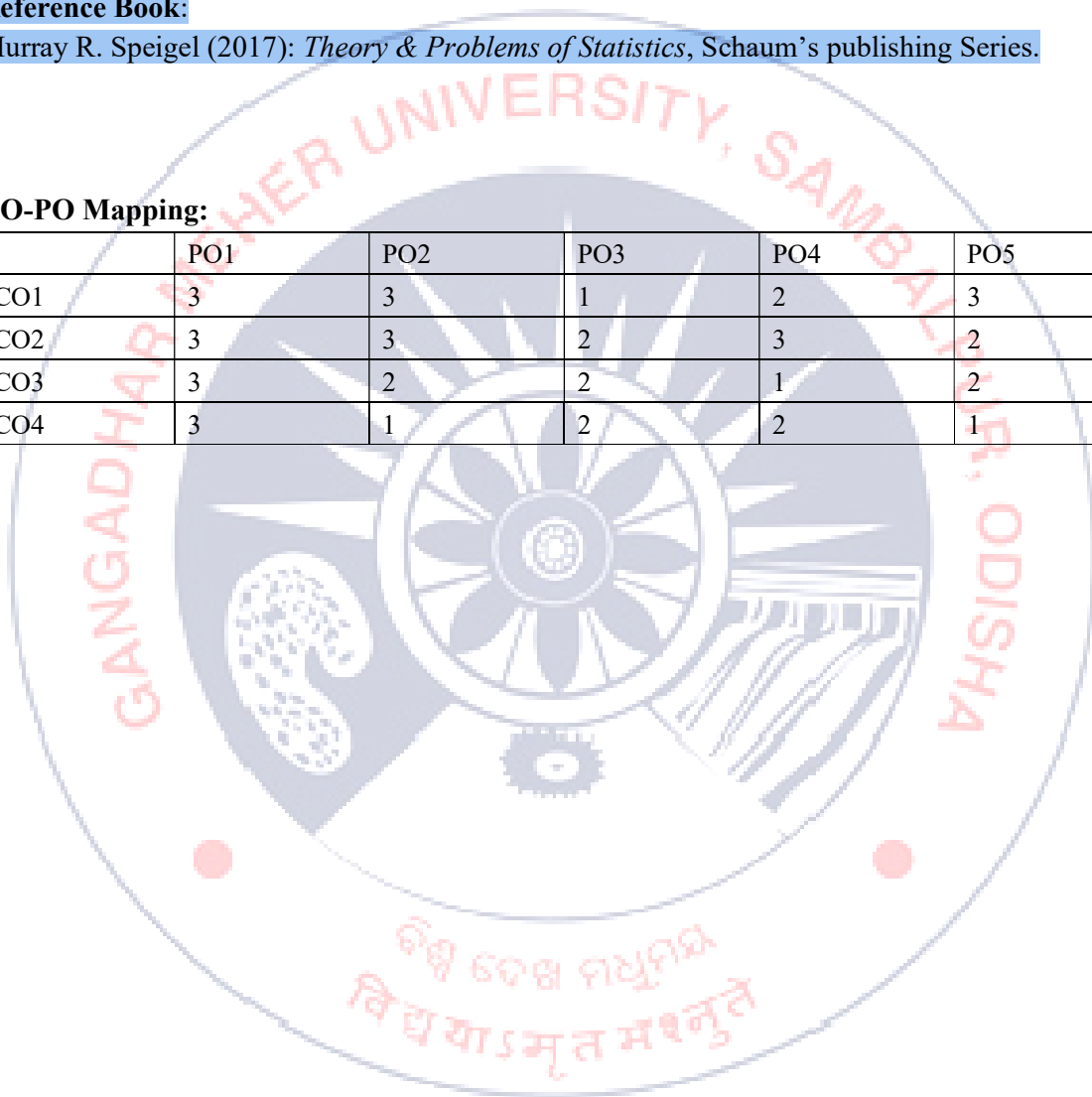
- S. C. Gupta (2017): *Fundamentals of Statistics*, Himalaya Publishing House, Delhi

Reference Book:

Murray R. Spiegel (2017): *Theory & Problems of Statistics*, Schaum's publishing Series.

CO-PO Mapping:

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CO2	3	3	2	3	2
CO3	3	2	2	1	2
CO4	3	1	2	2	1



Core Paper VIII: MICROECONOMICS II

Introduction:

This course is a sequel to Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers Market, general equilibrium and welfare, imperfect markets and topics under information economics.

Course Objectives:

The course aims at imparting and familiarizing the students with different market environment, i.e., perfect competition, oligopoly, monopolistic competitions and monopoly. The course also aims at imparting knowledge about basics of welfare economics.

Course Outcomes:

After successful completion of this course, students will be able to:

- CO1: Learn various concepts and theories of firm and industry equilibrium.
- CO2: Understand the basics of welfare economics by applying indifference curve analysis.
- CO3: Summarize and interpret output and price determination in different forms of market.
- CO4: Understand deduce conclusions on agent's behaviour using basics of Game theory.

Unit I: Firm Supply and Equilibrium

Market Environments; Pure competition; Supply decision of a competitive firm and Exceptions; Inverse Supply Function; Profits and Producer's Surplus; Long Run Supply Curve of a Firm; Long Run Average Costs; Short Run and Long Run Industry Supply; Industry Equilibrium in Short and Long Run; Meaning of Zero Profits; Economic Rent

Unit II: General Equilibrium, Efficiency and Welfare

The Edge worth Box; Trade; Pareto Efficient Allocations; Existence of equilibrium and efficiency; The Welfare Theorems and their implications; The Firm; Production and the Welfare Theorems ; Production possibilities, comparative advantage and Pareto efficiency

Unit III: Market Imperfections: Monopoly and Oligopoly

Barriers to Entry, Profit Maximization and Output Choice, Monopoly and resource Allocation, Monopoly, Product Quality and Durability, Price Discrimination, Second Degree Price Discrimination through Price Schedules, Regulation of Monopoly, Dynamic Views of Monopoly Oligopoly – Choosing a strategy; Quantity and price leadership; Simultaneous Quantity Setting; Example of Cournot Equilibrium; Simultaneous Price Setting; Collusion

Unit IV: Game Theory

The Payoff Matrix of a Game; Nash Equilibrium; Mixed Strategies ;The Prisoner's Dilemma; Repeated Games; Enforcing a cartel; Sequential Games; A Game of entry deterrence.

Text Book:

- H. R. Varian (2010): Intermediate Microeconomics: A Modern Approach, 8th Edition, W.W.

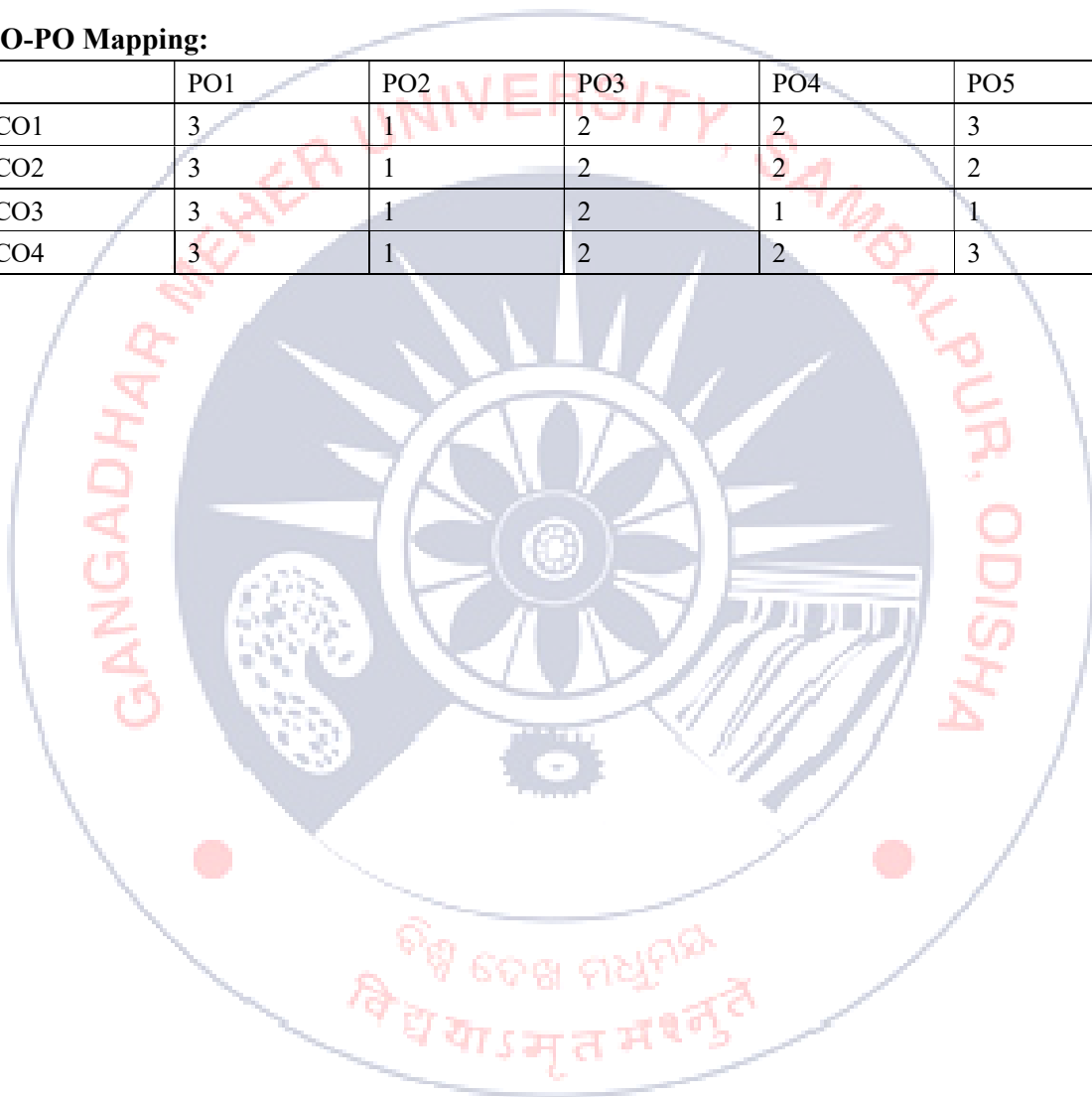
Norton and Company/Affiliated East-West Press (India). The workbook by Varian and Bergstrom may be used for problems.

Reference Book:

- C. Snyder and W. Nicholson (2012): Microeconomic Theory: Basic Principles and Extensions, 11th Edition, Cengage Learning, Delhi, India.
- Pindyck, Robert and Daniel Rubinfeld (2018): Microeconomics, 9th Edition, Pearson Education Inc

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CO3	3	1	2	1	1
CO4	3	1	2	2	3



Core Paper IX: MACROECONOMICS II

Introduction:

This course is a sequel to 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.

Course Objectives:

The main objective of this course is to introduce students to Macro economic theory and to prepare them for more advanced courses. The students will be given in depth knowledge of the recent developments in the Macro economic theory.

Course Outcomes:

After completing the course successfully, the students will be able to:

- CO1: Understand the macroeconomics of basic neoclassical growth theory.
- CO2: Elaborate the Keynesian adjustment process in open economy by extending the analysis to goods market, money market and foreign exchange market.
- CO3: Comprehend the key concepts of New classical theories and New Keynesian Theories.
- CO4: Identify the basic concepts underlying Balance of payments and exchange rate determination.

Unit I: Modeling Economic Growth

Accumulation of Capital in the basic Solow Model; supply and demand for goods, growth in the capital stock and the steady state, Golden rule level of capital: Comparing steady states, transition to the golden rule steady state with too much and too little capital, Population Growth, Technological Progress- Solow version, Beyond Solow Model and Endogenous Growth

Unit II: Open Economy and Macroeconomic Policy

Balance of payments- concept; meaning of equilibrium and disequilibrium in balance of payments; Determination of foreign exchange rate- the balance of payments theory; Fixed versus flexible exchange rates; Short-run open economy model- the basic Mundell-Fleming model; Macroeconomic Policies – Fiscal policy, Crowding –out and Crowding – in; Monetary policy and instruments, the Transmission Mechanism; Effectiveness of macroeconomic policies in open and closed economies

Unit III: Classical and Keynesian Macroeconomics Thoughts

Keynes verses classics: Classical macroeconomics, Employment and output determination, Say's law, the quantity theory of money, Keynes's General theory: Keynes's main propositions; analysis of the labour market, Keynes's critique of Say's law and Quantity theory of money, the orthodox Keynesian school, underemployment equilibrium in the Keynesian model, the Phillips curve and orthodox Keynesian school

Unit IV: Monetarist and New Classical Macroeconomic Thoughts

The orthodox monetarist school, the Quantity Theory of Money approach, the expectations augmented Phillips curve analysis, the orthodox monetarist school and stabilization policy
New Classical Economics: The influence of Robert e Lucas Jr, the structure of new classical models: the Rational Expectations hypothesis; and policy implications

Text Book:

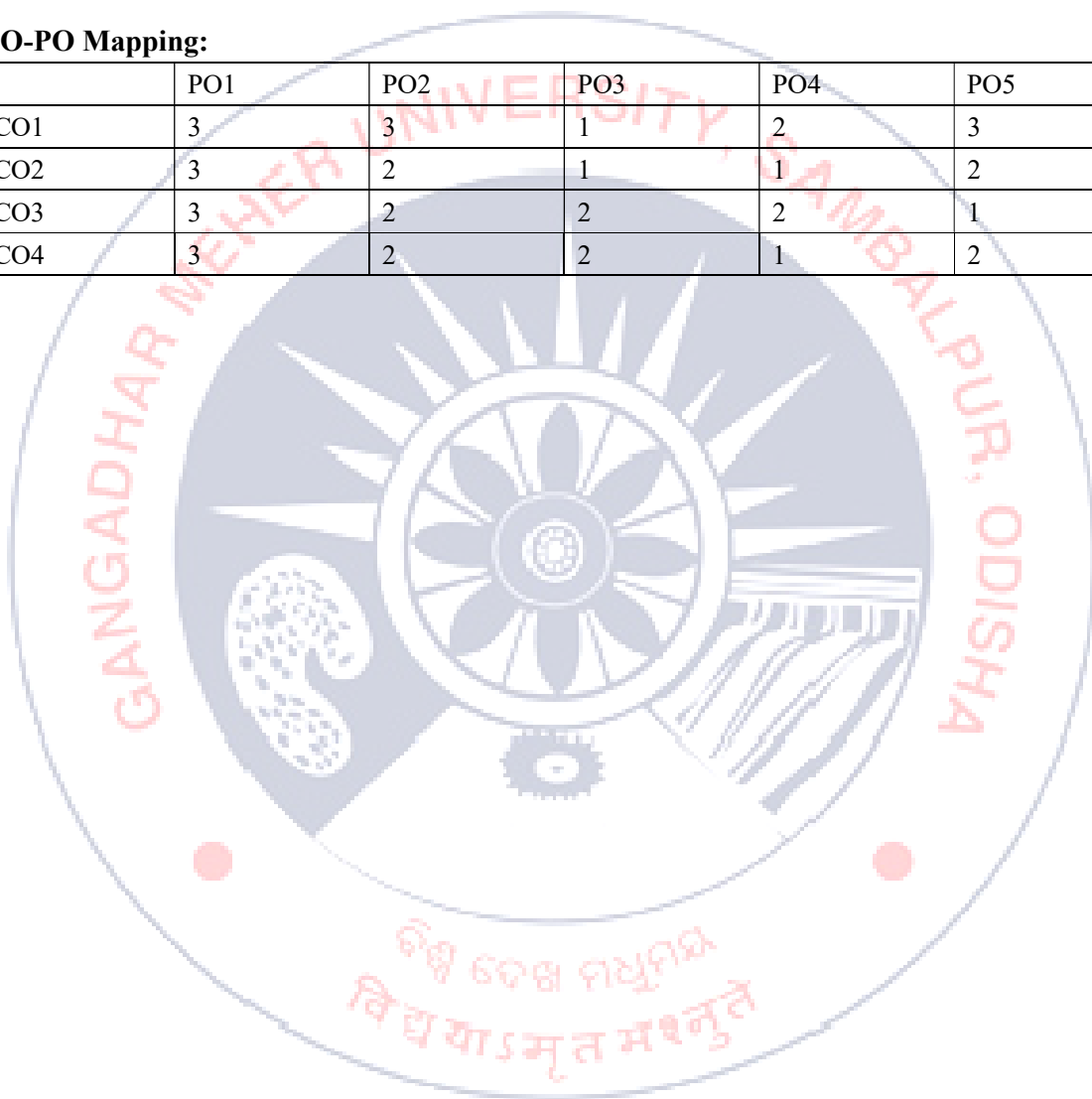
- N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:

- Brian Snowdon and Howard R Vane (2005): *Modern Macroeconomics: Its Origins, Development and Current State*, Edward Elgar

CO-PO Mapping:

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CO3	3	2	2	2	1
CO4	3	2	2	1	2



Core Paper X: Research Methodology

Introduction:

The course is to develop a research orientation among the students and to acquaint them with fundamentals of research methods. Specifically, the course aims at introducing them to the basic concepts used in research and to scientific social research methods and their approach. It includes discussions on sampling techniques, research designs and techniques of analysis.

Course Objectives:

The course aims at providing the basic framework among the undergraduate students to initiate research process in economics right from problem identification and preparing research design and learning to adhering to an appropriate methodology for improving the quality of research. The course provides guidelines specifically for improving the quality of research and learning to do empirical research.

Course Outcomes:

After Successful Completion of this Course, students shall be able to;

- CO1: Learn the concepts and steps in research.
- CO2: Learn different methods to carry out research.
- CO3: Relate the issues and problems in research.
- CO4: Use computer techniques and tools to analyze and design research.

Unit I: Basics of Research

Introduction to Research: Meaning, Objectives, Motivation, Types, Approaches, Significance, Research Process, Criteria of Good Research; Qualities of a Good Researcher, Research as a Career

Unit II: Research Problem

Defining the Research Problem: What is a Research Problem? Selecting the Problem, Necessity of Defining the Problem, Technique Involved in Defining a Problem; Research Design: Meaning, Need, Features of a Good Design, Important Concepts Relating to Research Design, Different Research Designs, Basic Principles of Experimental Designs

Unit III: Issues in Research

Measurement in Research, Measurement Scales, Sources of Error in Measurement, Tests of Sound Measurement, Techniques of Measurement Tools, Scaling and Important Scaling Technique
Research Ethics: codes and ethics, permissions to research, responsibilities, confidentiality, feedback, participatory research; Research Proposal and literature review: research proposal, review of literature, levels of analysis, using the library and internet, abstracting, word processing, plagiarism, Concept of IPR

Unit IV: Actions in Research

English in report writing: words, sentences, paragraph, writing style; The Report: improving quality, sections, drawing conclusions, evaluation checklists, persistence; Common Citation Styles

Text Book:

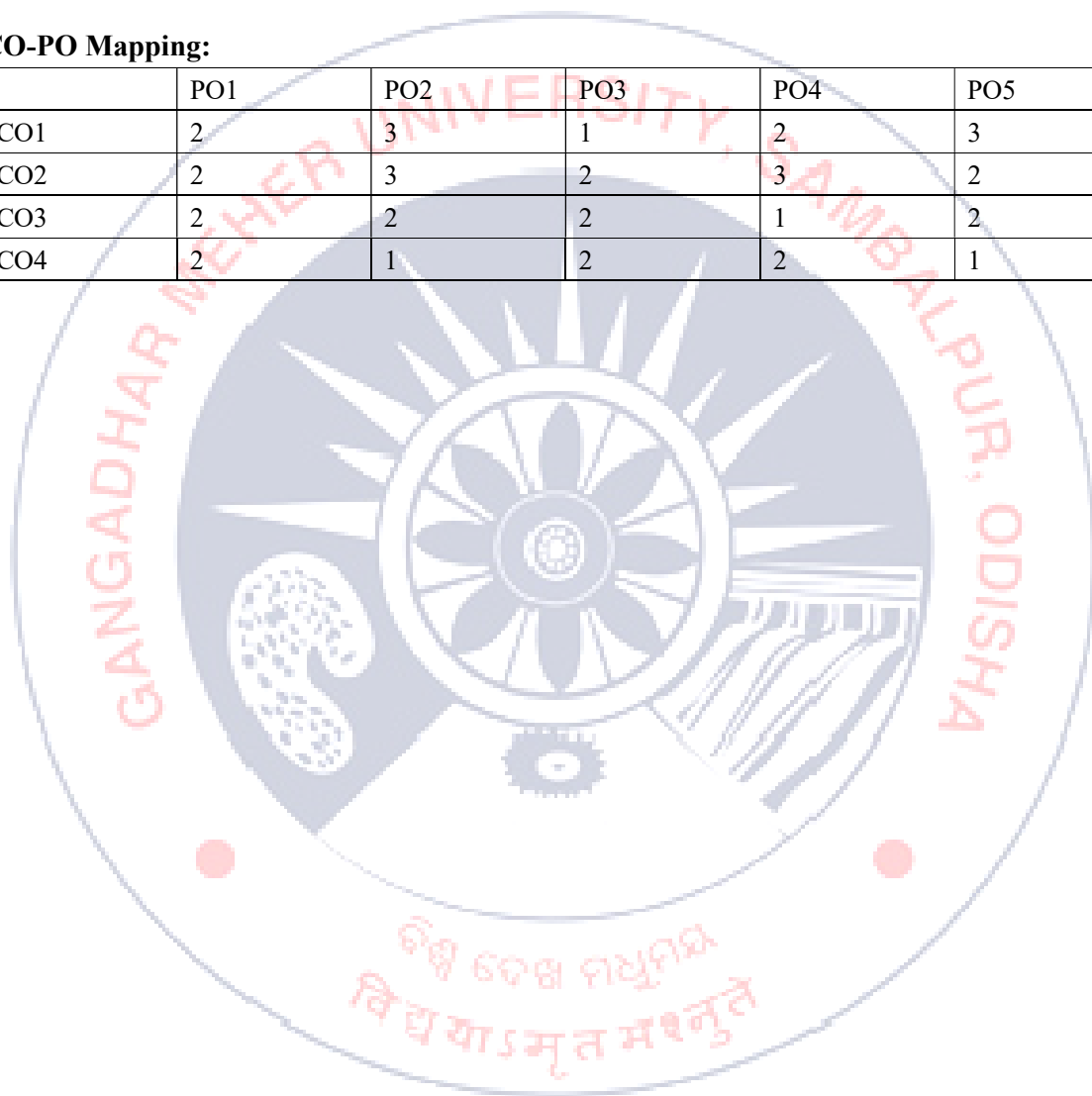
- Kothari, C. R. (2004): Research Methodology: Methods and Techniques, New Age International Private Limited Publishers, New Delhi.

Reference Books:

- Guthrie, G. (2010): Basic Research Methods, Sage Publications India Private Limited, New Delhi.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	1	2	3
CO2	2	3	2	3	2
CO3	2	2	2	1	2
CO4	2	1	2	2	1



Core Paper XI: INDIAN ECONOMY I

Introduction:

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in India, the reading list will have to be updated annually.

Course Objective:

To familiarize students on the paradigm shifts and ground realities related to the Indian economy with special focus on the planning period.

Course Outcomes:

After the successful completion of the course, the student will be able to:

- CO1: Understand the pre-independence economic situation in India.
- CO2: Classify different phases of Population growth and human development.
- CO3: Articulate the challenges facing Indian Economy and relate it to Economic development.
- CO4: Illustrate and correlate the planning and economic development in India.

Unit I: Basic Characteristics of Indian Economy as a Developing Economy

Indian Economy in the Pre-British Period; The Structure and Organization of Villages and Towns; Industries and Handicrafts in Pre-British India; Colonialism; Economic Consequences of British Rule; Decline of Handicrafts and Progressive Ruralization; The Land System and Commercialization of Agriculture; Industrial Transition; Colonial Exploitation and Impacts – Underdevelopment; Colonization and Modernization; State Policies and Economic Underdevelopment; The Current State of Indian Economy

Unit II: Population and Human Development

Population Growth and Economic Development – size, growth and future of population; Causes of rapid population growth; Population and economic development; Population policy; Demographic issues – Sex and Age Composition of population; Demographic Dividend; Urbanization and Migration; Human Resource Development – Indicators and importance of Human Resource Development; Education policy; Health and nutrition.

Unit III: National Income in India – The Growth Story and Current Challenges

Trends in national and per capita income; Changes in sectoral composition of national income; Regional disparities in Growth and Income; Savings and Investment and Economic Growth – The Linkage; Poverty – Estimation and Trends, Poverty Alleviation Programs – MGNREGA, NRLM, SJSRY; Inequality – Measures and trends in India; Unemployment – Nature, Estimates, Trends, Causes and Employment Policy

Unit IV: Economic Planning in India

Rationale, Features, Objectives, Strategies, Achievements and Assessment of Planning in India; Eleventh Five Year Plan – Objectives, Targets and Achievements; Twelfth Five Year Plan – Vision and Strategy; From Planning to NITI – Transforming India's Development Agenda.

Text Book:

- Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Books:

- Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.
- Indian Economy Datt and Sundharam, Gaurav Datt and Ashwani Mahajan, S Chand Publications, 7th Revised Edition
- Indian Economy Since Independence, ed by Uma Kapila, Academic Foundation, Revised Nineteenth Edition 2008-09
- Government of India (Current Year): Economic Survey, Ministry of Finance, New Delhi

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	3
CO2	2	3	2	1	3
CO3	2	3	2	1	3
CO4	2	3	2	1	3

Core Paper XII: DEVELOPMENT ECONOMICS I

Introduction:

This is the first part of a two-part course on economic development. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. The axiomatic basis for inequality measurement is used to develop measures of inequality and connections between growth and inequality are explored. The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Course Objectives:

To understand the dynamics of change in the economy from a theoretical framework.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Understand the development process of underdeveloped countries and gain better understanding of basic developmental problems that LDCs are facing.
- CO2: Know, understand the theories of economic development and apply them in their practical research problems.
- CO3: Learn to critically examine and analyse the relevance of various developmental policies.
- CO4: Interpret quantitatively the impact of various policy regimes with econometric techniques and provide policy suggestions.

Unit I: Study of Economic Development

Development Economics as a subject; economic growth and economic development; Characteristics of underdeveloped countries – vicious cycle of poverty and cumulative causation; obstacles to economic development; measures of economic development – national and per capita income, basic needs approach, capabilities approach, three core values of development, PQLI, HDI, HPI, MDPI, GDI; capital formation and economic development

Unit II: Theories of Economic Growth and Development

Classical theory, Marxian theory; Schumpeterian theory; Rostow's stages of economic growth; Solow model and convergence with population growth and technical progress

Unit III: Poverty, Inequality, Agriculture, Industry and Development:

Measuring poverty: Head Count Ratio, Poverty Gap Ratio, Squared Poverty Ratio, FGT Ratio; Measuring Inequality – Lorenz curve and Kuznets' inverted U hypothesis; Growth, poverty and inequality; Policy options – some basic considerations

Agriculture, Industry and Economic Development: Role of agriculture; Transforming traditional agriculture; Barriers to agricultural development; Role of industrialization; Interdependence between agriculture and industries – A model of complementarities between agriculture and industry; terms of trade between agriculture and industry; functioning of markets in agrarian societies; interlinked agrarian markets

Unit IV: Institutions and Economic Development:

Role of institutions in economic development; Characteristics of good institutions and quality of institutions; The pre-requisites of a sound institutional structure; Different measures of institutions – aggregate governance index, property rights and risk of expropriation; The role of democracy in economic development; Role of markets and market failure; Institutional and cultural requirements for operation of effective private markets; Market facilitating conditions; Limitations of markets in LDCs; Corruption and economic development – tackling the problem of corruption

Text book:

- Todaro, Michael P and Stephen C Smith (2006): *Economic Development*, 8th Edition, Pearson

Reference Books:

- Debraj Ray (2009): *Development Economics*, Oxford University Press.
- Thirlwall, A P (2011): *Economics of Development*, 9th Edition, Palgrave Macmillan

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	2	2	3
CO2	3	2	2	3	3
CO3	3	2	1	3	3
CO4	3	3	2	2	3

Core Paper XIII: INDIAN ECONOMY II

Introduction:

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. Given the rapid changes taking place in the country, the reading list will have to be updated annually.

Course Objective:

To familiarize students on the issues related to different economic sectors of Indian economy and their contribution to Indian economic growth.

Course Outcomes:

After the successful completion of the course, the student will be able to:

- CO1: Connect with the current economic situation in Indian Agriculture.
- CO2: Relate the industrial policy and the growth & problems of Indian Industry.
- CO3: Understand the phenomenal growth of the Tertiary sector in Indian economy especially after the economic reforms in 90's.
- CO4: Sketch the policy in relation to environment and Sustainable development goals.

Unit I: Agricultural Development in India

Indian Agriculture: nature, importance, trends in agricultural production and productivity, factors determining production, land reforms, new agricultural strategies and green revolution, rural credit; Agricultural marketing and warehousing.

Unit II: Industrial Development in India

Trends in industrial output and productivities; Industrial Policies of 1948, 1956, 1977 and 1991; Industrial Licensing Policies – MRTP Act, FERA and FEMA; Growth and problems of SSIs, Industrial sickness; Industrial finance; Industrial labour.

Unit III: Tertiary Sector, HRD and the External Sector

Tertiary Sector: growth and contribution of service sector to GDP of India, share of services in employment; Human development – concept, evolution, measurement; HRD: indication, importance, education in India, Indian educational policy; Health and Nutrition.

Foreign Trade: role, composition and direction of India's foreign trade, trends of export and import in India, export promotion versus import substitution; Balance of Payments of India; India's Trade Policies; Foreign Capital – FDI, Aid and MNCs.

Unit IV: Indian Economy and Environment

Environmental Policies in India: The Environment (Protection) Act 1986, The Environment (Protection) Rules 1986, The National Forest Policy 1988, Policy statement for Abatement of Pollution 1992, National Conservation Strategy and Policy Statement on Environment and Development 1992, The National Environment Appellate Authority Act 1997, National Environmental Policy 2006; Global deal with Climate Change: Introduction, Intergovernmental Panel for Climate Change (IPCC), Impact of Climate Change on India, Global Response on Climate Change, Possible Role of India.

Text Book:

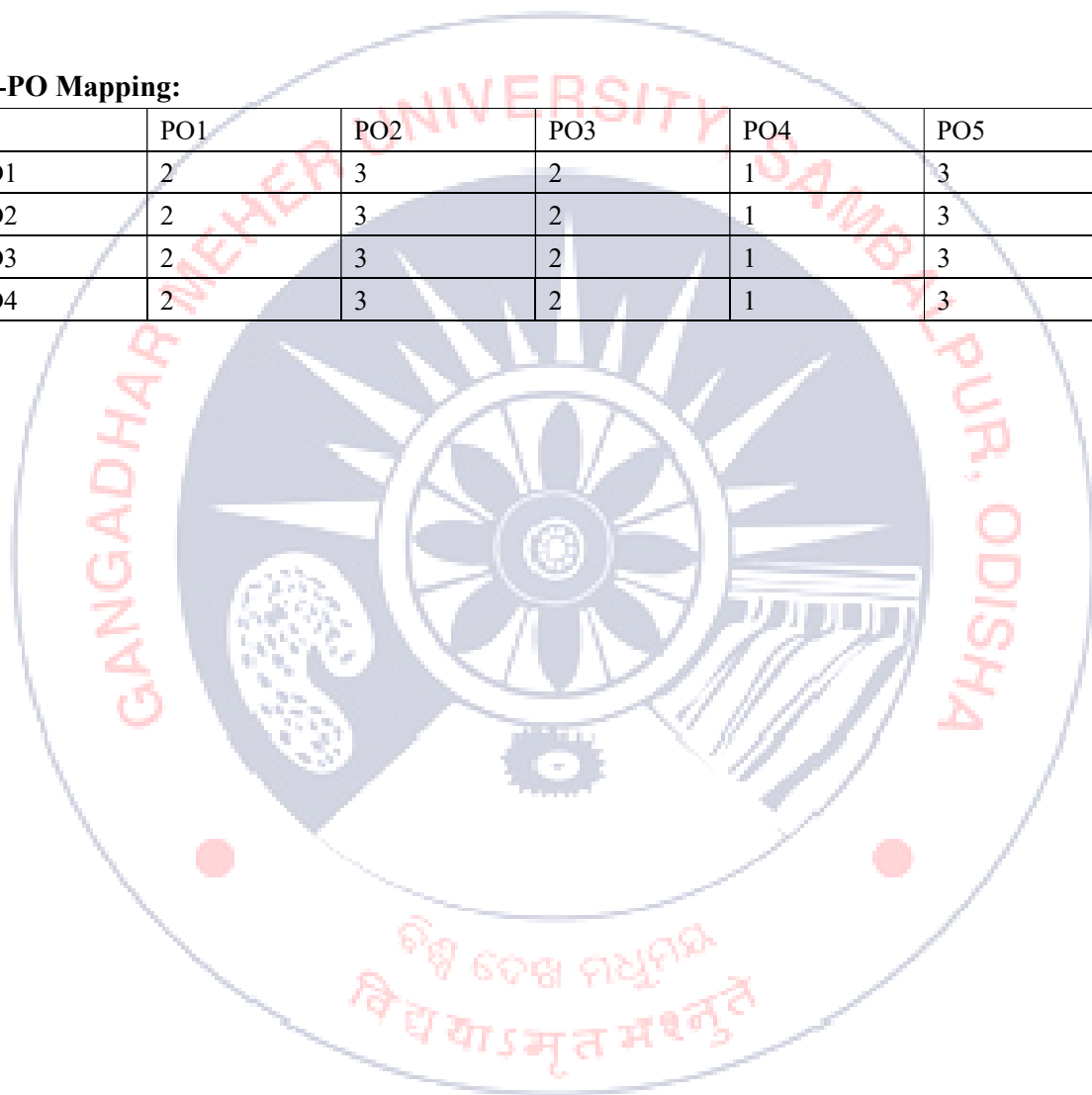
- Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Books:

- Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.
- Indian Economy Datt and Sundharam, GauravDatt and AshwaniMahajan, S Chand Publications, 7th Revised Edition
- Indian Economy Since Independence, ed by Uma Kapila, Academic Foundation, Revised Nineteenth Edition 2008-09
- Government of India (Current Year): Economic Survey, Ministry of Finance, New Delhi

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Core Paper XIV: DEVELOPMENT ECONOMICS II

Introduction:

This is the second unit of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development.

Course Objective:

To provide a perspective of factors in economic development.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Articulate population in the process of economic development.
- CO2: Know, understand the theories of economic development and apply them in their practical research problems.
- CO3: Explore the environment-growth inter-linkages.
- CO4: Learn to critically examine and analyze the relevance of various developmental policies related to international trade and economic growth.

Unit I: Population and Development

Demographic concepts : birth and death rates, age structure, fertility and its determinants, the Malthusian population trap and the microeconomic household theory of fertility; costs and benefits of population growth and the model of low level equilibrium trap; rural-urban migration – the Harris Todaro migration model and policy implications

Unit II: Dualism and Economic Development

Dualism – geographic, social and technological; the theory of cumulative causation (Myrdal); the regional inequalities in the context of economic development; the inverted U relationship; international inequality and the centre periphery thesis; dependency, exploitation and unequal exchange; the dualistic development thesis and its implications

Unit III: Environment and Development

Basic issues of environment and development – Development and environment inter-linkage; Poverty, environmental degradation and externalities; common property resources, renewable and non-renewable resources; concept of sustainable development; basics of climate change

Unit IV: International Trade and Economic Development and Financing Economic Development

Trade and economic development; export led growth; terms of trade and economic growth – the Prebisch Singer Hypothesis; trade strategies for development – import substitution vs. export promotion; international commodity agreements; trade vs aid.

Saving, capital formation and economic development; financial sector and economic development; taxation, public borrowing and economic development; inflation, foreign finance, investment and

foreign aid – controversies and opportunities

Text Book:

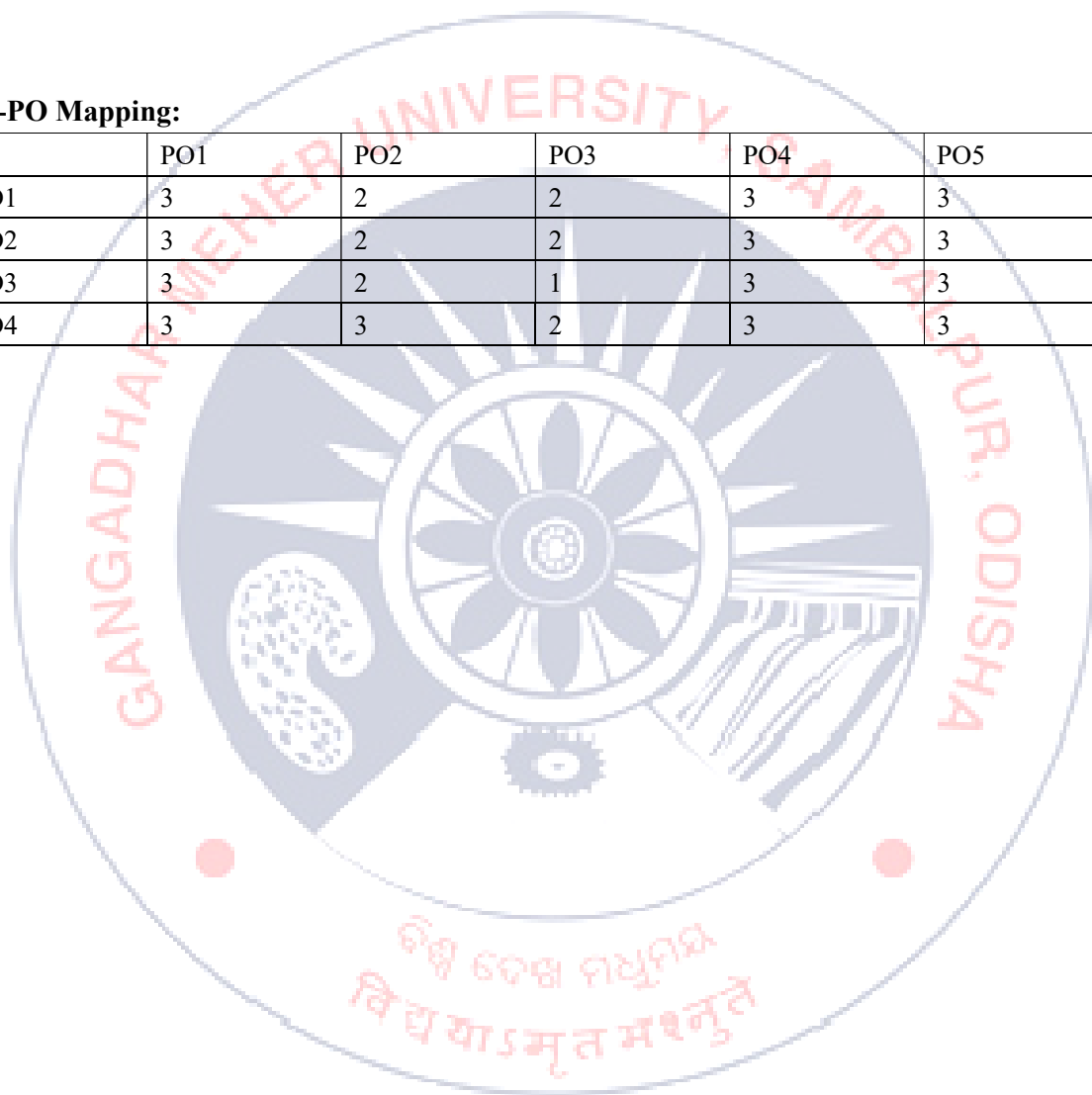
- Todaro, Michael P and Stephen C Smith (2006): *Economic Development*, 8th Edition, Pearson

Reference Book:

- Thirlwall, A P (2011): *Economics of Development*, 9th Edition, Palgrave Macmillan

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CO3	3	2	1	3	3
CO4	3	3	2	3	3



DSE Group I
(A student has to choose any two from group I under DSE-1& DSE - 2)

Discipline Specific Elective Paper 1: ECONOMIC HISTORY OF INDIA 1857-1947

Introduction:

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the compulsions of colonial rule. This course links directly to the course on India's economic development after independence in 1947.

Course Objective:

To understand the pre-independence economic situation of Indian economy

Course Outcomes:

After Successful completion of the course, the student will be able to;

CO1: Understand the economic situation in pre-independence India.

CO2: Understand the contribution of agriculture in the pre-independence period.

CO3: Understand the development of industries in India.

CO4: Compare the economic growth and development process between pre- & post independence India.

Unit I: Introduction: Colonial India: Background and Introduction and Macro trends;

Overview of colonial economy, National Income; population; occupational structure

Unit II: Agriculture

Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines

Unit III: Railways and Industry

Railways; the de-industrialization debate; evolution of entrepreneurial and industrial structure; nature of industrialization in the interwar period; constraints to industrial breakthrough; labor relations

Unit IV: Economy and State in the Imperial Context

The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy

Text Book:

- Tirthankar Roy, *The Economic History of India 1857-1947*, Oxford University Press, 3rd edition, 2011.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	1	1	2
CO2	2	3	1	1	2
CO3	2	3	1	1	2
CO4	2	3	1	1	2

Discipline Specific Elective Paper -2: INTRODUCTORY ECONOMETRICS

Introduction:

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Course Objective:

To develop in students the data analysis and interpretation skill with a theoretical background

COURSE OUTCOMES

After successful completion of this course, students shall be able to:

- CO1: Learn the basic econometric tools like regression and various estimation problems associated with it.
- CO2: Learn to test various economic theories with help of data by using econometric tools.
- CO3: Interpret econometrics model results and provide policy suggestions
- CO4: Know, understand and absorb the techniques and their practical research problems.

Unit I: Introduction

Definition, Nature and scope of econometrics; Theoretical Probability Distributions: Binomial, Poisson and Normal distributions: their properties

Theory of Estimation: Estimation of parameters; properties of estimators – small sample and asymptotic properties; point and interval estimation

Unit II: Hypothesis Testing

Testing of hypotheses: defining statistical hypotheses; Simple and composite hypotheses; Null and alternative hypothesis; Type I and Type II errors, Critical region; Neyman-Pearson lemma; Power of a test; Test statistics: z, chi square, t and F

Unit III: Linear Regression Analysis

Two variable linear regression model – Assumptions; Least square estimates, Variance and co-variance between Least square estimates; BLUE properties; Standard errors of estimates; Co-efficient of determination; Inference in a two variable linear regression model; ANOVA; Forecasting, Introduction to multiple regression models.

Unit IV: Violation of Classical Assumptions

Heteroscedasticity, Multicollinearity and Auto-correlation: Meaning, consequences, tests and remedies.

Text Book:

- Gujarati, D & Sangeetha (2007); “Basic Econometrics”, McGraw Hill Book Co.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	2	3	1	3
CO2	2	2	3	1	3
CO3	2	2	3	1	3
CO4	2	2	3	1	3

Discipline Specific Elective Paper -3: ODISHA ECONOMY

Introduction:

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in Odisha in pre- and post-Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in Odisha, the reading list will have to be updated annually.

Course Objective:

To understand Odisha's economic situation and its future prospects.

Course Outcomes:

After completion of the course, the students will be able to;

CO1: Understand the economic situation in the pre-independence period.

CO2: Locate the macroeconomics problems in Odisha.

CO3: Identify the sectoral contributions and problems in Odisha economy.

CO4: Recognise the problems associated with social capital in Odisha.

Unit I: Odisha Economy before 1947

Orissa's Economy in the Nineteenth Century: Benevolence or Exploitation, Forces of Nature, Animal Power, The Company Steps in, Public Works and Public Health, Education, Disintegration of Village Economy, New Social Environment, Changing Position of Social Classes, The Moneylenders, The Borrowers, Money-flows from Village to Metropolis, Pauperization of Peasantry, The Wage Earners, Demographic Changes, Profiting from Rural Adversity; Diarchy in 1919 and Separation of Provincial Finances from Central Government in 1937; Emergence of Federal Finance (Ref.: Das 1976a and 1976b, GoO 2016)

Unit II: Macro Economy of Odisha

A macro glance of Odisha economy: aggregate income, broad sectoral decomposition, performance of districts, employment, child labour and bonded labour, employment programmes, consumption expenditure, cost of living; Odisha State public finances (Chapter 14 and 15 of Ref 1; & Chapter 2 and 9 of Ref 2)

Unit III: Agriculture, Industry, Infrastructure and Environment in Odisha

Agriculture: land ownership and land tenure, agricultural wages and rural unemployment, production and productivity of major crops, agricultural inputs, agricultural policy; Animal Husbandry; Fisheries (Chapter 1 to 3 of Ref 1; & Chapter 3 of Ref 2)

Industry: Investment, industrial policy, and the growth of large industries, mining and quarrying; Construction; tertiary sector: tourism, transport and power; Water Resources, Forest Resources (Chapter 4 to 8 of Ref 1; & Chapter 4 & 5 of Ref 2)

Unit IV: Social Sector in Odisha

Poverty: income poverty and inequality; health sector: outcomes, infrastructure, finance, public health, NRHM; education: Literacy, Primary education, secondary education, higher education, SSA; human development (Chapter 9 to 13 of Ref 1; & Chapter 7 & 8 of Ref 2)

Text Book:

- Nayak, P., Panda, S. C., Pattanaik, P. K. (2016): **The Economy of Odisha: A Profile**, Oxford University Press, New Delhi

Reference Book:

- GoO (Latest): Odisha Economic Survey, Planning and Convergence Department, Directorate of Economics and Statistics, Government of Odisha, Bhubaneswar
- GoO (2004): *Human Development Report 2004 Orissa*, Planning and Coordination Department, Government of Odisha, Bhubaneswar
- GoO (2018): 80 Years Odisha Budget: Commemorative Volume, Department of Finance, Bhubaneswar

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	3
CO2	2	3	2	1	3
CO3	2	3	2	1	3
CO4	2	3	2	1	3

Discipline Specific Elective Paper-4: MONEY, BANKING AND FINANCIAL MARKET

Introduction:

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Course Objective:

To acquaint the students with the functioning of financial market and institutions.

Course outcomes:

After Successful completion of the course, the students will be able to;

CO1: Classify money and its theoretical origin

CO2: Recognise the functioning of Banking system.

CO3: Articulate the operations and importance of central bank.

CO4: Explore the functioning Financial Market and Financial Institutions.

Unit I: Money

Definition and functions of money; Types of money: legal tender money and bank money, near money; Value of money and index number; construction of index number; WPI, CPI, PPI, GDP deflator, Cost of living index

Demand for money- Classical and Keynesian approaches, Patinkin and the Real Balance Effect; Friedman's Quantity theory of money. Supply of Money- Measures of money supply: M_1, M_2, M_3 and M_4 ; High powered money and money multiplier.

Unit II: Commercial Banking

Meaning and types; Functions of commercial banks; the process of credit creation and its limitations; Balance sheet and portfolio management, Banking sector reforms in India; Lessons from Global Financial Crisis and Policy Response in India.

Unit III: Central Banking

Functions of a central bank; Quantitative and qualitative methods of credit control; Central Bank's Supervision and prudential measures for Financial stability; current monetary policy of India, liquidity adjustment facility (LAF) through Repo and reverse repo operation, MSF.

Unit IV: Financial Markets

Financial Market, Meaning, Types, Money market and Capital Market, Primary and Secondary Market, Stock Exchanges, SEBI; Role of Financial Markets for Economic Development.

Text Book

- L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5th edition, 2011.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	3	1	2
CO2	3	2	3	1	2
CO3	3	2	2	1	2
CO4	3	2	3	1	3

Discipline Specific Elective Paper-5: PUBLIC ECONOMICS

Introduction:

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities.

Course Objectives:

To introduce students to the preparation of the budget and its role in macroeconomic management, and to expose them to the financial transfers between different tiers of the government in the Indian context.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Recognise central theories and empirical basis for budgeting.
- CO2: Deal with the economic analysis of public expenditure for promoting socially efficient resource allocation.
- CO3: Relate to the taxation policy of the government.
- CO4: Explain the financing of the government and debt sustainability.

Unit I: Introduction to Public Finance and Public Budgets

Public Finance: meaning and scope, distinction between public and private finance; public good versus private good; Principle of maximum social advantage; Market failure and role of government; Public Budget: kinds of budget, economic and functional classification of the budget; Balanced and unbalanced budget; Balanced budget multiplier; Budget as an instrument of economic policy

Unit II: Public Expenditure

Meaning, classification, principles, canons and effects, causes of growth of public expenditure, Wagner's law of increasing state activities, Peacock-Wiseman hypotheses

Unit III: Public Revenue

Sources of Public Revenue; Taxation - meaning, canons and classification of taxes, impact and incidence of taxes, division of tax burden, the benefit and ability to pay approaches, taxable capacity, effects of taxation, characteristics of a good tax system, major trends in tax revenue of central and state governments in India

Unit IV: Public Debt

Sources, effects, debt burden – Classical/ Ricardian views, Keynesian and post-Keynesian views; shifting - intergenerational equity, methods of debt redemption, debt management, tax versus debt

Text Books:

- J. Hindriks and G. Myles (2006): *Intermediate Public Economics*, MIT Press.

Reference Book:

- R. A. Musgrave and P. B. Musgrave(1989): *Public Finance in Theory and Practices*.

McGraw Hill

- Bhatia H L (2018): *Public Finance*. Vikas Publishing House.

CO-PO Mapping:2

	PO1	PO2	PO3	PO4	P2O5
CO1	3	2	1	1	2
CO2	3	2	1	1	2
CO3	3	1	1	2	2
CO4	3	2	1	2	3



DSE Group II
(A student has to choose any two from group II under DSE-3 & DSE- 4)
Discipline Specific Elective Paper- 1: Environmental Economics

Introduction:

This course introduces the students to the basics of environmental economics to understand the fundamentals of environmental concerns and develop insights into valuation of environment.

Course Objectives:

Environmental issues at local, national and global levels are among the foremost challenges facing society today and are a result of complex interactions of natural processes with economic forces and policies. The effects of development on the environment and access to resources is one of the most challenging fields that has grown over the past four decades and is now one of the key areas of study. Since policies for preventing environmental degradation is at the heart of every nation's policy-making, this course equip the students with key environmental issues faced by any developing nation. It lays down the fundamental understanding of sustainable development, ways to measure it and how these policies can be implemented.

Course Outcomes:

After the successful completion of the course, the student will be able to:

- CO1: Evaluate the economic roots of environmental problems.
- CO2: Formulate environmental problems using economic theory.
- CO3: Understand the economic valuations of environmental resources
- CO4: Understand the current mechanism and the inherent economic interpretation of the pollution control measures at the national as well as at the global level.

Unit I: Economy and Environment

Nature and Scope of Environmental Economics- Environment and Economy interaction; Environment as a public good- Serious environmental problems of Developing Countries – Air pollution, water pollution and deforestation.

Global environmental problems, trade and environment, International Cooperation for Environmental Protections, Montreal and other protocols.

Unit II: The Economics of Pollution and Climate change

Pollution as externality, The market Approach to optimal pollution, Property rights and market bargain theorems, Coase theorem; Pigouvian Taxation, Subsidies and optimal pollution; Climate change – concept, causes, effects and management.

Unit III: Valuation of Environmental Damage

Methods and difficulties of environmental valuation, Economic value, Use value, Option value, Existence value; Direct and Indirect Valuation of Environmental Goods: The hedonic price approach, Contingent valuation, Travel cost approach.

Unit IV: Natural Resources and Sustainable Development

Natural resources- Renewable and exhaustible; Tragedy of commons, People's Participation in the

management of common property resources; Sustainable Development Concepts, Sustainability rules, Indicators of sustainability, Solow/Hartwick, Natural capital stock, Safe Minimum Standard.

Text Book:

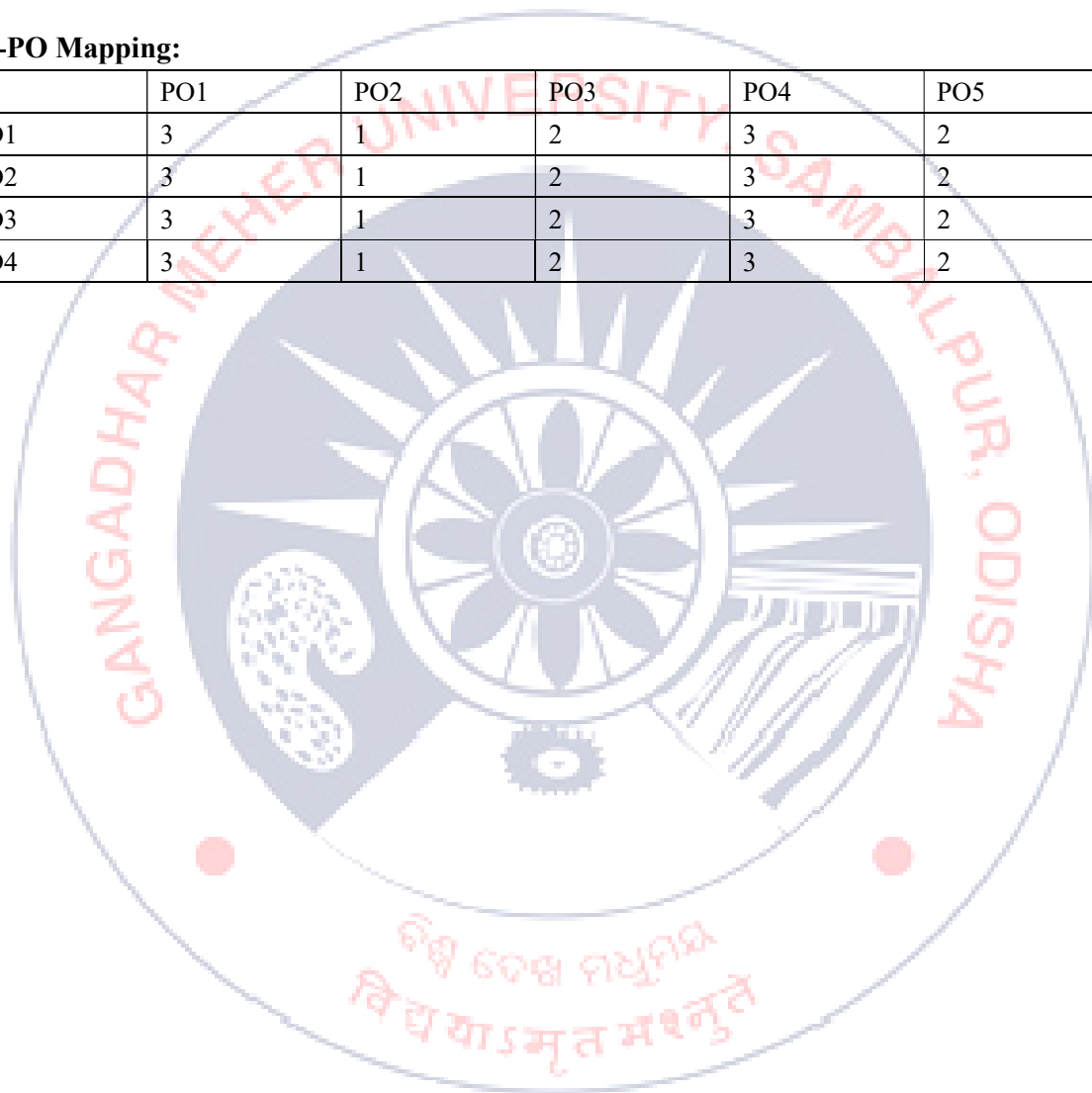
- Bhattacharya, R. N. (2002): Environmental Economics: An Indian Perspectives, OUP, New Delhi

Reference Book:

- Kolstad, C.D (1999); Environmental Economics Oxford University Press, New Delhi

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	2	3	2
CO2	3	1	2	3	2
CO3	3	1	2	3	2
CO4	3	1	2	3	2



Discipline Specific Elective Paper-2: INTERNATIONAL ECONOMICS

Introduction:

This course introduces the students to international trade and finance to understand the theories of international trade and develop insights into trade policy and balance of payments. The course also develops insight into international financial system and the trade policy of India.

Course Objective:

To provide the students theoretical background to understand the functioning of the global economy.

Course Outcomes:

Course Outcomes:

After the successful completion of the course, the student will be able to;

CO1: Understand the basis for trade between two economies.

CO2: Measure the benefits accrued from international trade.

CO3: Evaluate the cost and the rate at which the goods and services will be traded between two countries.

CO4: Relate economic policies to international trade.

UNIT I: Importance of Trade and Trade Theories

Importance of the study of International Economics; Inter-regional and international trade; Theories of Trade-absolute advantage (Adam Smith), comparative advantage (David Ricardo) and opportunity cost (Haberler); Heckscher-Ohlin theory of trade — its main features, assumptions and limitations (Leontief Paradox) Factor Price Equalization theorem.

UNIT II: Trade Policy and International Economic Institutions

Concepts of terms of trade and their importance; Doctrine of reciprocal demand – Offer curve technique; Gains from trade ;Trade as an Engine of Growth and Concept of immiserizing growth, Tariffs and quotas – their impact in partial equilibrium analysis; General Equilibrium analysis of tariff and the concept of optimum tariff, Functions of IMF (Conditional Clause), Role of IMF in international liquidity, Reforms for the emergence of international monetary system; World Bank and WTO; Their achievements and failures; Their Role from the point of view of India

UNIT III: Exchange Rate

Concept and Types of Exchange Rate (bilateral vs. trade-weighted exchange rate, cross exchange rate, spot, forward, futures), Demand for and Supply of foreign exchange, Exchange Rate Determination: Mint Parity Theory, Purchasing-Power Parity Theory, Fixed versus Flexible exchange rate

UNIT IV: Balance of Trade and Payments

Concepts and components of balance of trade and balance of payments; Disequilibrium in balance of payments; Various measures to correct deficit in BOPs (Expenditure switching and expenditure reducing policies, Direct control), Depreciation Vs. Devaluation; Elasticity approach to devaluation, Foreign trade multiplier- Concept and implications.

Text Book:

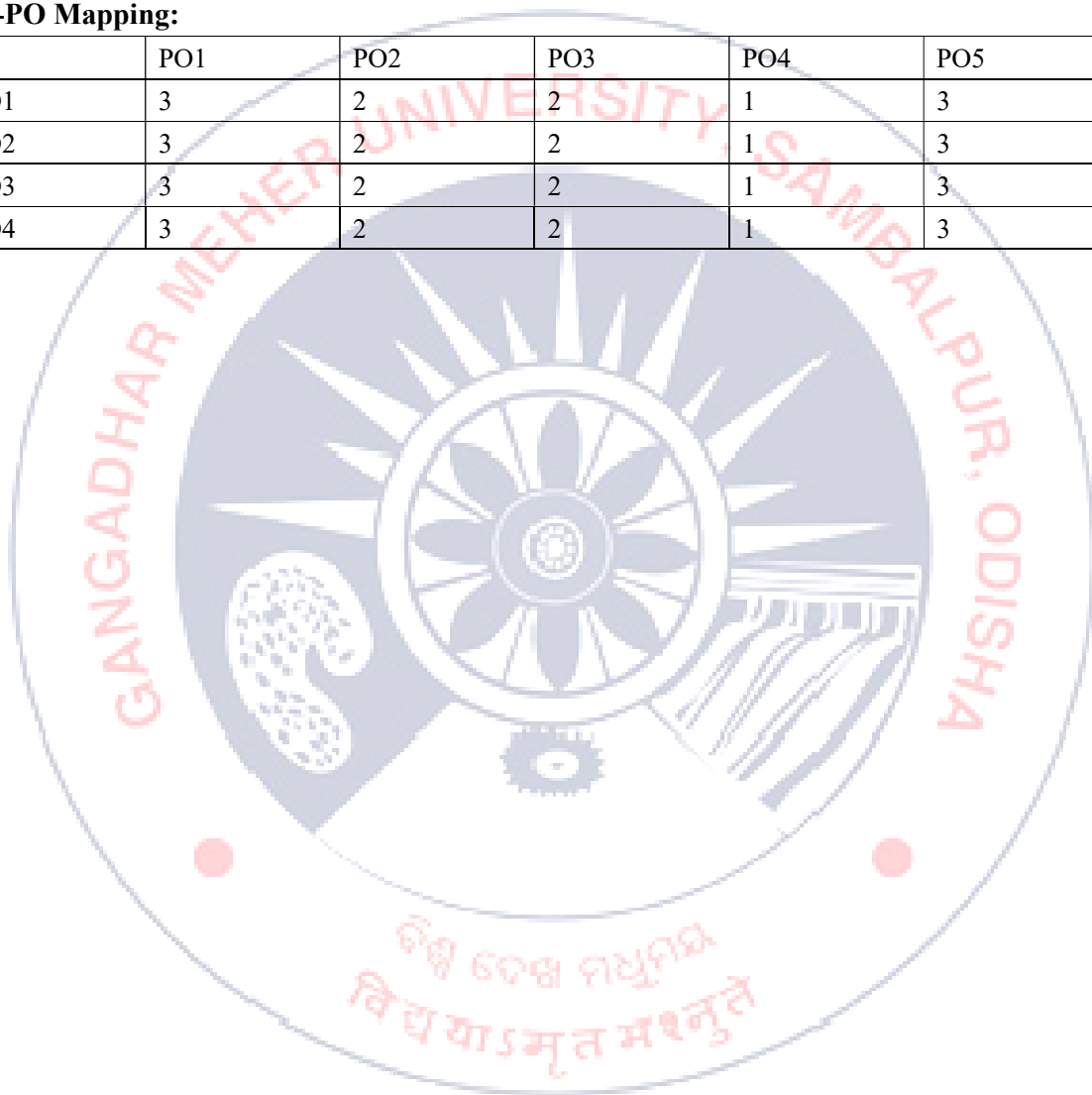
- Mannur H. G (Recent Edition) *International Economics*, Vikash Publishing

Reference Books:

- SalvatoreDominick, *InternationalEconomics*,WileIndia.
- SoderstenBo andReedJ, *InternationalEconomics*, McMillanPublisher

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	2	2	1	3
CO2	3	2	2	1	3
CO3	3	2	2	1	3
CO4	3	2	2	1	3



Discipline Specific Elective Paper-3: AGRICULTURAL ECONOMICS

Course description

This course introduces students to the significance of agriculture in the Indian economy and helps to understand the role agriculture in economic development. It is designed to develop insights into changing agricultural practices in India and assess the significance of agriculture in the era of liberalization.

Course Objective:

To introduce the economics of agriculture and role of agriculture in economic development.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Understand the importance of agriculture in economic development vis-à-vis major agricultural issues and policies.
- CO2: Endow with a theoretical understanding of agricultural marketing, price policy, credit structure etc that will enhance the analytical understanding of the issues.
- CO3: Analyze the complex nature of Indian Agriculture with the support of economic theory.
- CO4: Understand India's position in International Agricultural trade and evaluate the Impact of World Trade Organization on Indian agriculture

UNIT I: Agriculture and Economic Growth

Role of Agriculture in Economic Development, sectoral changes and agriculture, agriculture in rural development, farm and non-farm employment issues, inter-linkages between agriculture and industry; empirical evidence of inter-dependence between agriculture and industry; Schultz's hypothesis on traditional agriculture – its criticisms; Mechanization of Indian Agriculture; Case for and against farm mechanization; Green revolution and trends of mechanization in India

UNIT II: Agricultural Price and Marketing

Agricultural price policy for a developing economy – objectives and effectiveness of agricultural price policy, elements of agricultural price policy, features of an ideal agricultural price policy, agricultural price policy in India and public distribution system

Agricultural marketing – need and criteria for assessing efficiency, agricultural marketing system in India, development of a national agricultural marketing platform

UNIT III: Risk and Uncertainty in Agriculture

Difference between risk and uncertainty, types of uncertainty in agriculture, measures for mitigating risk and uncertainty in agriculture, new agricultural insurance scheme of India

Rural credit in India, importance and estimates, agencies for rural credit, review of progress of institutional finance in rural India since independence

UNIT IV: Agriculture in India

Agriculture in Indian Planning, Globalization and Indian agriculture, Case for and against privatization of agriculture, WTO and India's trade in agricultural commodities

Text Book

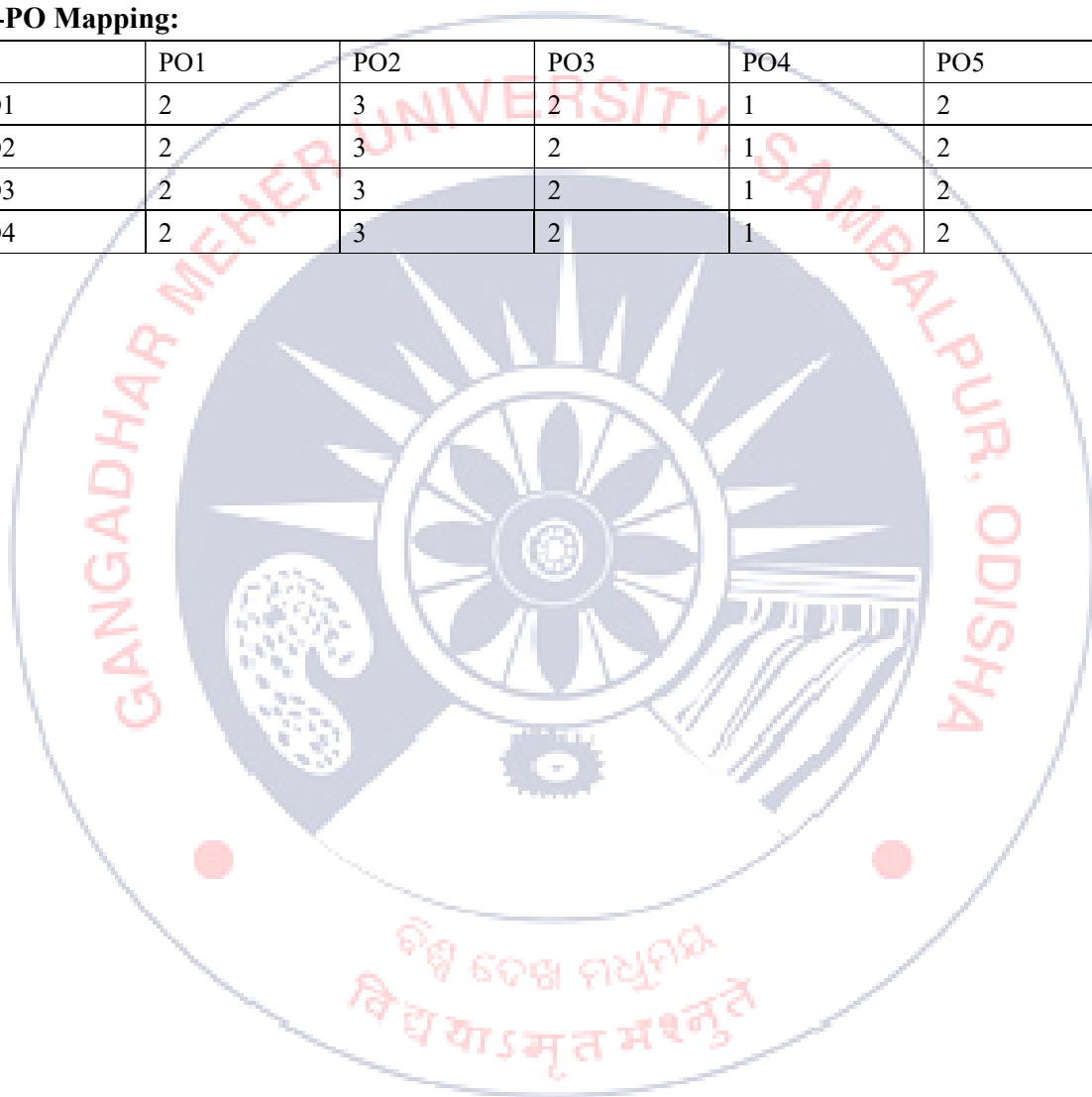
- Sony, R. N. (2006), Leading Issues in Agricultural Economics, Vishal Publishing, Jalandhar.

Reference Book:

- Sadhu, A N and A Singh (2008), Fundamentals of Agricultural Economics, Himalaya Publishing House, Mumbai.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	2
CO2	2	3	2	1	2
CO3	2	3	2	1	2
CO4	2	3	2	1	2



Discipline Specific Elective Paper-4: HISTORY OF ECONOMIC THOUGHT

Introduction:

This course provides a perspective to our intellectual history, development of economic thought and helps relate this thought to the current thinking. It introduces the students to the philosophers and economists who developed economic reasoning and modeling of economic activities. It also helps create critical abilities and attitudes.

Course Objective:

To introduce student with different branches to economic thought.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Understand how the economic philosophy, theory and writings evolved with due course of time and happenings of the world.
- CO2: Compare the basic difference between early economic thought.
- CO3: Understand basis and origin of standard economic theory.
- CO4: Evaluate the unique and heterodox Indian development thinking in comparison to the concurrent conventional development thinking in the rest of the world.

UNIT I: Introduction and Early Economic Thought

Mercantilism-main characteristics, Thomas Mur's views ; Physiocracy- main features, Tableau Economique, taxation; Early Classicism: Adam Smith- Theory of Value, Division of labour, capital accumulation, distribution, views on trade and economic progress; David Ricardo-theory of value, theory of rent, distribution, ideas on international trade and development.

UNIT II: Classicism Vs Marxism

Thomas Malthus- population theory, glut theory; Karl Marx-dynamic of social change, theory of value, surplus value, theory of profit, crisis of capitalism, Johns Stuart Mill- ideas on value, distribution, views as a synthesizer.

UNIT III: The Marginalists' Revolution

Economic ideas of Jevons, Walras and Menger, Bohm-Bowerk, Wicksell ; Marshall – Role of time element in price determination, ideas on consumer surplus, Marshal as a synthesizer

UNIT IV: Indian Economic Thought

Main themes of Kautilya's Arthasashtra; Modern Economic Ideas: Dada Bhai Naoroji, M.K. Gandhi, village swaraj, non-violence, machines and labour, cottage industries; Comparison of Indian Economic thought with western Economic thought.

Text Book

- Gide, Charles and Rist, Charles (1973): A History of Economic Doctrines, Oxford University Press.
- Dasgupta, A K (1986): Epochs of Economic Theory, Oxford University Press, New Delhi

Reference Book:

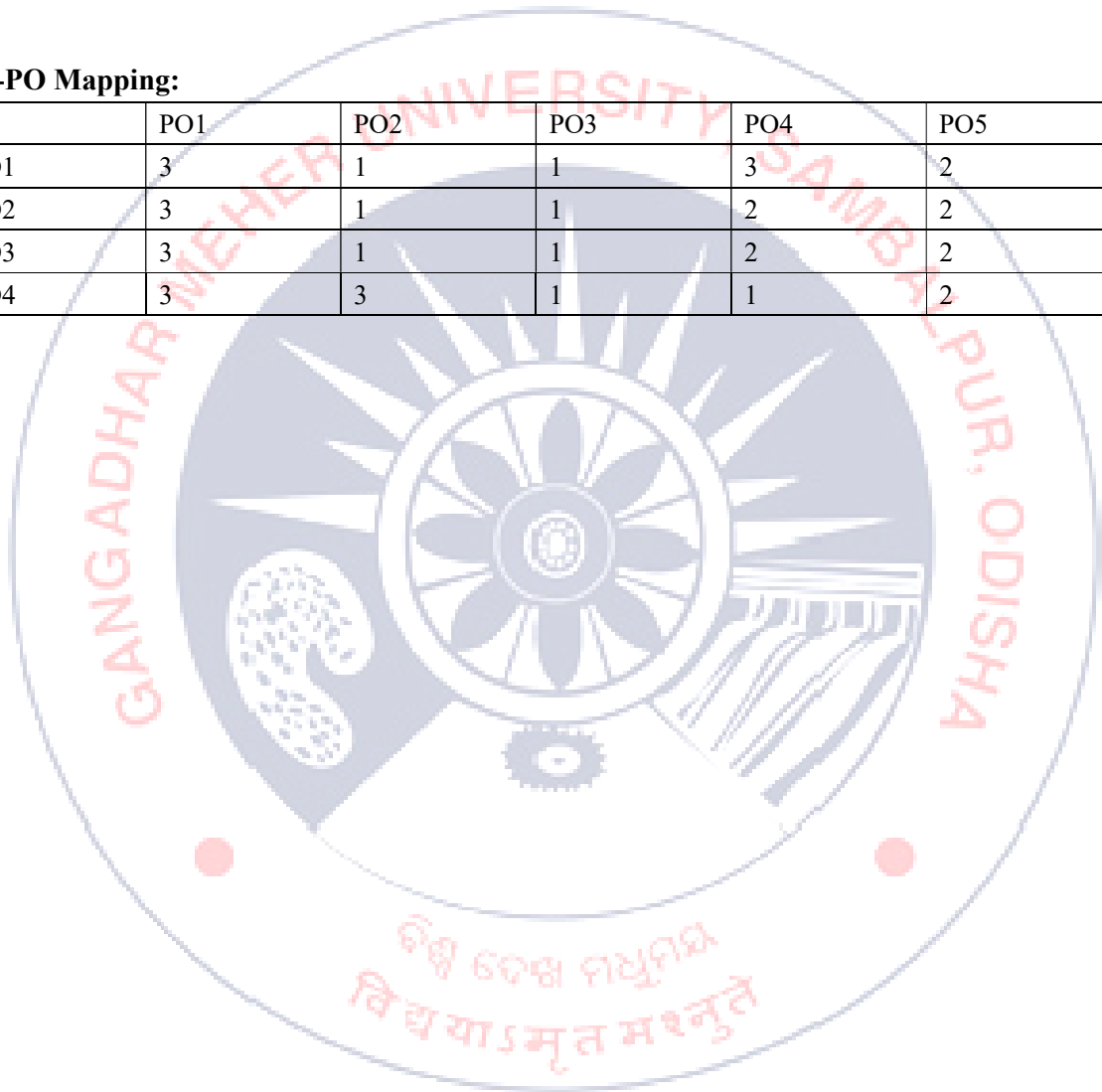
- O'Brien, D P (1975): Classical Economists, Oxford, Clarendon Press.
- Ekelund, Robert B. and Robert F. Hebert (1990): A History of Economic Theory and Method,

third edition, New York: McGraw Hill

- Henry W. Spiegel (1991): The Growth of Economic Thought, 3rd ed. Durham: Duke University Press
- Tom Bottomore (1980): Dictionary of Marxist Thought, Basic Blackwell Publishers.
- Roll, Eric, History of Economic Thought, Faber and Faber Ltd.
- L N Rangarajan (1992): Kautilya: The Arthashastra, edited, rearranged, translated and introduced; Penguin books, New Delhi

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	1	3	2
CO2	3	1	1	2	2
CO3	3	1	1	2	2
CO4	3	3	1	1	2



Discipline Specific Elective Paper –4: DISSERTATION / RESEARCH PROJECT

(College can give this choice only for students with above 60% aggregate marks)

Introduction : The project is intended to establish the connection between Economics as confined to the text books and class rooms and Economics at play in the ground. It is expected to give an empirical content to the subject. Economics is defined as the study of mankind in the ordinary business of life. It studies individual as well as group behavior.

Course Objective:

To introduce student with research and .

Course Outcomes:

After the successful completion of the course, the student will be able to;

CO1: Understand how the economic philosophy, theory and writings evolved with due course of time and happenings of the world.

CO2: Compare the basic difference between early economic thought.

CO3: Understand basis and origin of standard economic theory.

CO4: Evaluate the unique and heterodox Indian development thinking in comparison to the concurrent conventional development thinking in the rest of the world.

Project work at the undergraduate level is an in-depth study on a topic chosen by the student. The objective of the project work for the students at undergraduate level is to expose students to the social and real world contexts in which the subjects taught in the classroom have applications. Therefore, the topic must be related to the field of study the student is enrolled. It is undertaken with the guidance of a faculty supervisor, and involves a prolonged period of investigation and writing. The supervisor is supposed to help the student and mentor him/her throughout, from selection of the topic to submission of the project report.

The project output will be a project report written on the topic, chosen by the student and approved by the guide, in about 10000 words.

The process of project preparation typically comprises of an investigation of a particular topic, based on the application of philosophical and theoretical knowledge available in the already existing scientific literature and other published sources of information. The student may use already available data (texts, documents, artworks or existing data sets) or she may go for collection of data from the field. The final report should ideally have the following sections.

- (1) Abstract (in about 500 words) containing a summary of the entire report.
- (2) Introduction of the topic, arguments for choosing such a topic and the key investigation propositions.
- (3) A review of the existing knowledge on the topic
- (4) Information on the data and data treatment tools used in the study
- (5) An analysis of data and findings
- (6) Conclusions
- (7) References

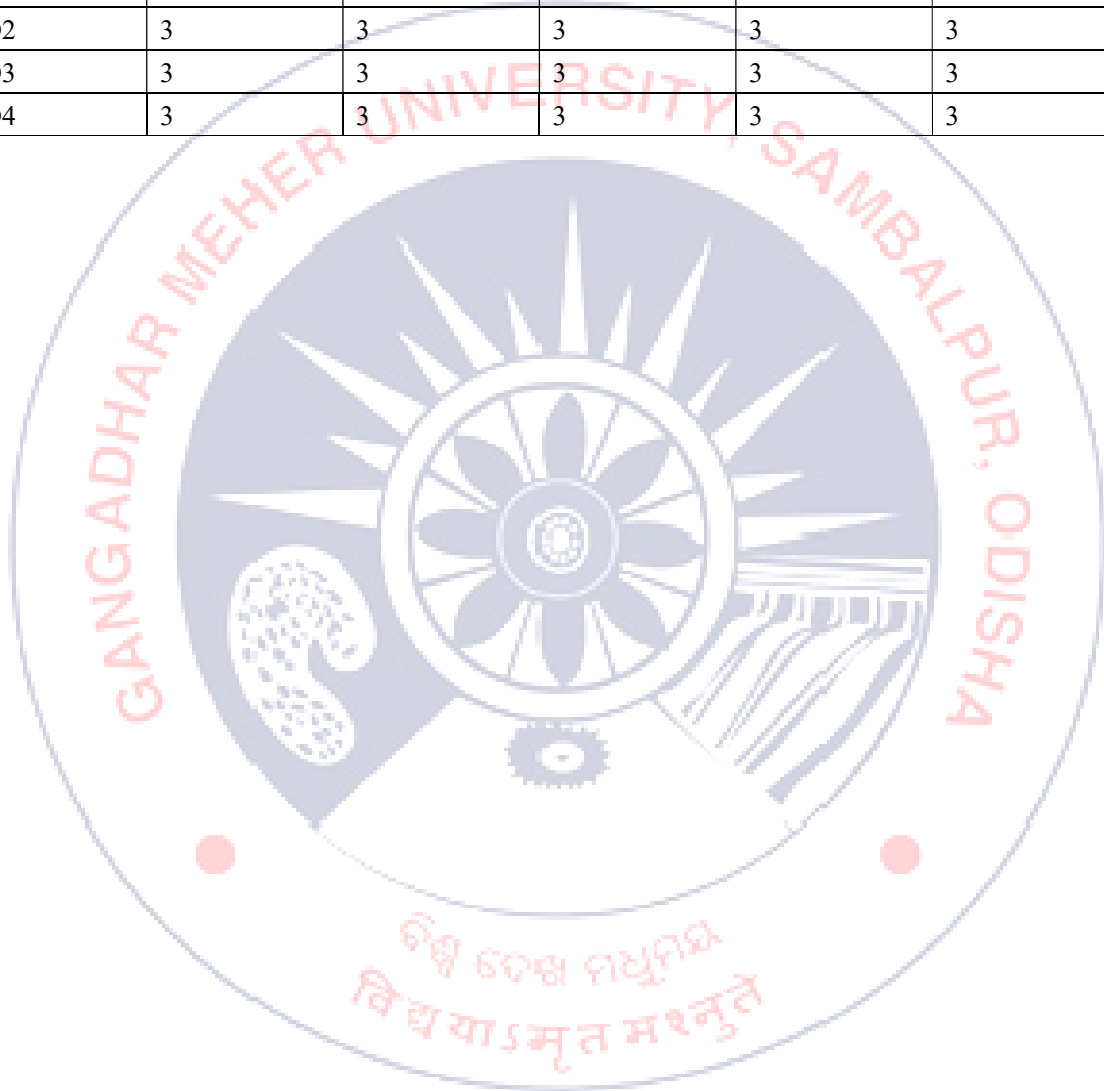
A good research project requires sincere efforts and honest dedication from students. Moreover, it

requires an engagement of the student with an issue under probe for a fairly long period of time compared to their preparations of subjects for the examination.

A successful completion of the project report has several positive learning outcomes for the student. It empowers the student with the life skill of patience and persistence. It also helps the student to locate her theoretical understandings in the context of socio-economic and political realities.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3



Generic Elective Paper I: INDIAN ECONOMY

Introduction: This paper introduces the students to the essentials of Indian economy with an intention of understanding the basic feature of the Indian economy and its planning process. It also aids in developing an insight into the agricultural and industrial development of India. The students will understand the problems and policies relating to the agricultural and industrial sectors of India and current challenges of Indian economy.

Course Objective:

To familiarize students on the issues related to different economic sectors of Indian economy and their contribution to Indian economic growth.

Course Outcomes:

After the successful completion of the course, the student will be able to;

CO1: Identify the current economic problems facing India.

CO2: Read the current economic situation in Indian Agriculture.

CO3: Understand the industrial policy and the growth & problems of Indian Industry.

CO4: Understand the phenomenal growth of the Tertiary sector in Indian economy especially after the economic reforms in 90's.

Unit I: Introduction to Indian Economy and Current Challenges

Colonialism & British Rule: Exploitation and under-development in India; Basic features of India Economy; Indian Economy as a developing economy; Demographic trends in India - Size and growth of population, Occupational structure, Sex composition, Age structure and demographic dividend; Causes of population growth and population policy; The problem of unemployment and recent policies for employment generation; The problem of inequality in income distribution and its causes, Policies to address inequality.

Unit II: Indian Agriculture

Role of Agriculture in Indian Economy; Cause of low productivity, Green Revolution and Land Reforms, Agricultural Finance-Sources and Problems; Agricultural Marketing in India

Unit III: Industrial Development in India

Role of Industrialization in Indian Economy; Small Scale & Cottage Industries: Meaning, Role, Problems and Remedies; Industrial Policies of 1948, 1956, 1977 and 1991; Problems of Industrial Development in India; Industrial Sickness

Unit IV: Service Sector in India

Growth & Contribution to GDP; Composition and relative importance of service sector; Factors determining growth of the sector; ICT and IT – Spread and Policy; Sustainability of services led growth

Text Book:

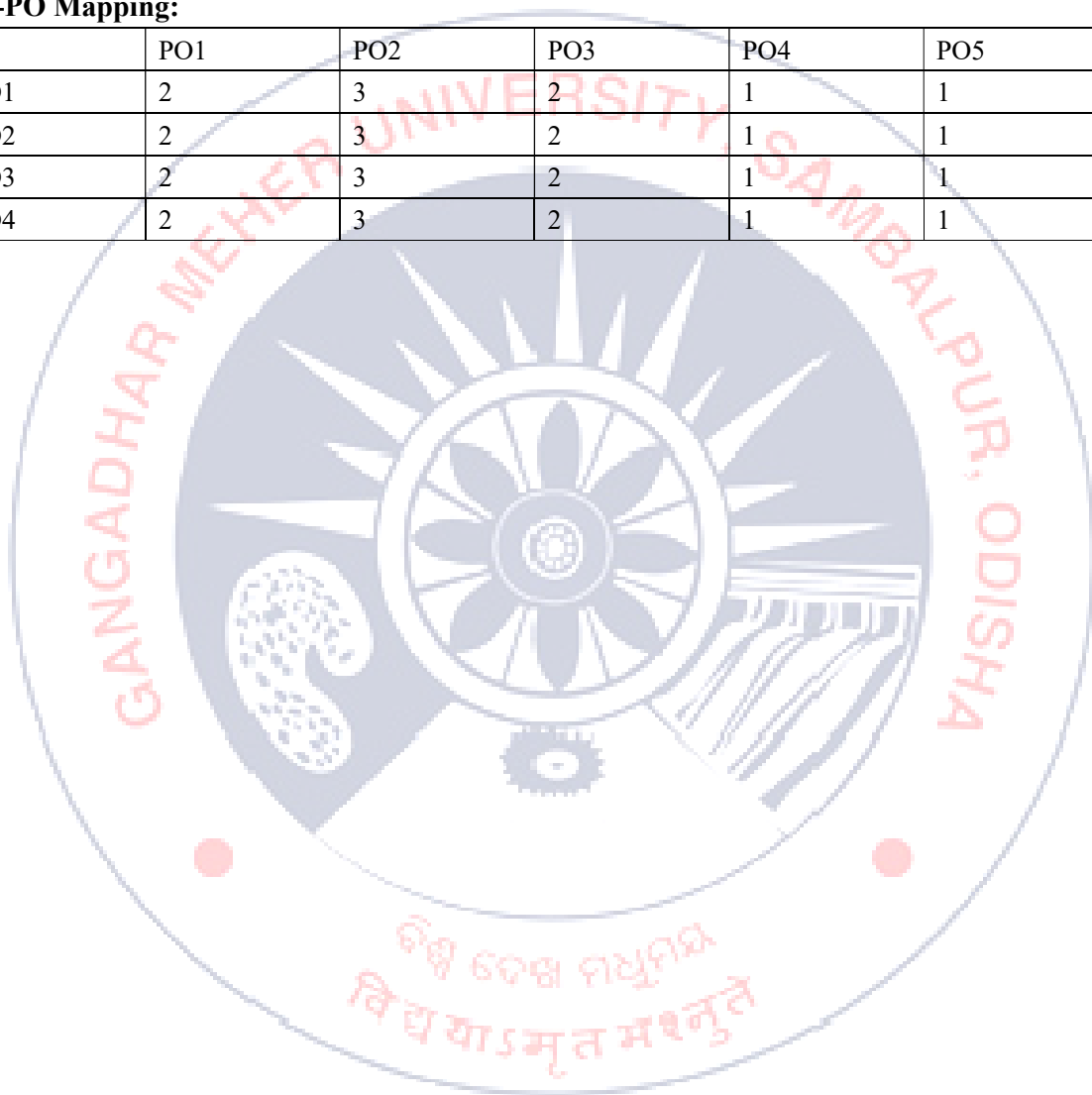
- Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Book

- Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	1
CO2	2	3	2	1	1
CO3	2	3	2	1	1
CO4	2	3	2	1	1



Generic Elective Paper II: INDIAN ECONOMY II

Introduction: : This paper is the part II of Indian economy deals with the external sector, financial markets in India, Indian Public Finances and Economic Reforms. This paper also throws some light on current challenges of Indian Economy.

Course Objective:

To familiarize students on the issues related to different economic sectors of Indian economy and their contribution to Indian economic growth.

Course Outcomes:

After the successful completion of the course, the student will be able to;

CO1: Read the performance of external sector in India.

CO2: Understand the operations of financial market in India.

CO3: Interpret the performance of budgets and budgetary policies in India

CO4: Relate to the macroeconomic problems in Indian economy.

Unit I: External Sector in India

Trends, Composition & Direction in exports from and imports of India; Problems of Balance of Payment: Causes of deficit in BOP & measures to correct it; Trade Policy- Export Promotion Vs Import Substitution; Foreign Trade Policy of India; WTO and India

Unit II: Financial Markets in India

Commercial Banking in India- Nationalization of Banks; Lead bank scheme and branch expansion; RBI - Functions, Monetary Policy; Development Banking- IFCI, IDBI, SIDBI and NABARD

Unit III: Indian Public Finance

Public Expenditure-Growth and Composition, Causes of Growth of Public Expenditure in India: Tax Revenue of Central and State Governments; Concept of VAT; Deficit Financing in India- Revenue, Budget, Fiscal and Primary Deficits; Purpose and Effects of Deficit Financing; India's Fiscal Policy- Objectives

Unit IV: Current Challenges Facing Indian Economy

Inflation – Causes, Consequences and Anti-inflationary Policy; Poverty – Poverty line and Estimates, Major Poverty Alleviation Programmes; Environmental Degradation – Growth and Environment; Population Growth and Environment; Environment Policy; Economic Reforms- Globalization, Macroeconomic Stabilization, Structural Reforms, and their impact on the Indian Economy; Foreign capital and MNCs-Role and consequences

Text Book:

- Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Book

- Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.
- Basu, Kaushik (2016): *An Economist in the Real World: The Art of Policy Making in India*, Penguin

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	2	3	2	1	1
CO2	2	3	2	1	1
CO3	2	3	2	1	1
CO4	2	3	2	1	1



Generic Elective Paper III: INTRODUCTORY MICROECONOMICS

Introduction:

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situation.

Course Objectives:

The course aims at familiarizing the students pertaining to decisions made at individual level by consumers and firms after evaluating resources, costs and trade-offs by the consumers and firms.

Course Outcomes

After successful completion of this course, students will be able to:

CO1: Understand basic concepts of Microeconomics

CO2: Recognise nature and of consumer behaviour

CO3: Classify different market structures

CO4: Understand the basics of factor pricing.

Unit I: Exploring the Subject Matter of Economics, Markets and Welfare

The Ten Principles of Economics: How people make decisions; Working of the economy as a whole; Thinking Like an Economist: The economist as Scientist – The scientific method: Observation, Theory and more observation; Role of assumptions; Economic Models; Why economists disagree; Graphs in Economics

The market forces; Markets and competition; The demand and supply curves – Market vs. individual curves, Shifts in demand and supply curves; Market equilibrium and changes there in; Price elasticity of demand – determinants and computation; Income and cross elasticity of demand; The price elasticity of supply – determinants and Computation; Consumer and Producer Surplus

Unit II: Theory of Consumer Choice

The Budget Constraint; Preferences – representing preferences with indifference curves; Properties of indifference curves; Two extreme examples of indifference curves; Optimization – Equilibrium; Change in equilibrium due to changes in income, changes in price; Income and substitution effect; Derivation of demand curve; Three applications – Demand for Giffen goods, Wages and Labour Supply, Interest rate and Household saving

Unit III: The Firm and Market Structures

Cost concepts; Production and costs; The various measures of cost – Fixed and variable cost, average and marginal cost; Cost curves and their shapes; Costs in the short run and in the long run; Economies and diseconomies of scale. Firms in competitive markets – What is a competitive market; Profit maximization and the competitive firm's supply curve; The marginal cost curve and the firm's supply decision; Firm's short-run decision to shut down; Firm's long-run decision to exit or enter a market; The supply curve in a competitive market – short run and long run

Unit IV: The Input Markets

The demand for labour – The production function and the marginal product of labour; Value of the marginal product of labour and demand for labour; Shifts in labour demand curve; The supply of labour – the trade-off between work and leisure; Shifts in the labour supply curve; Equilibrium in the labour market; Other factors of production: Land and capital; Linkages among factors of production.

Text Book:

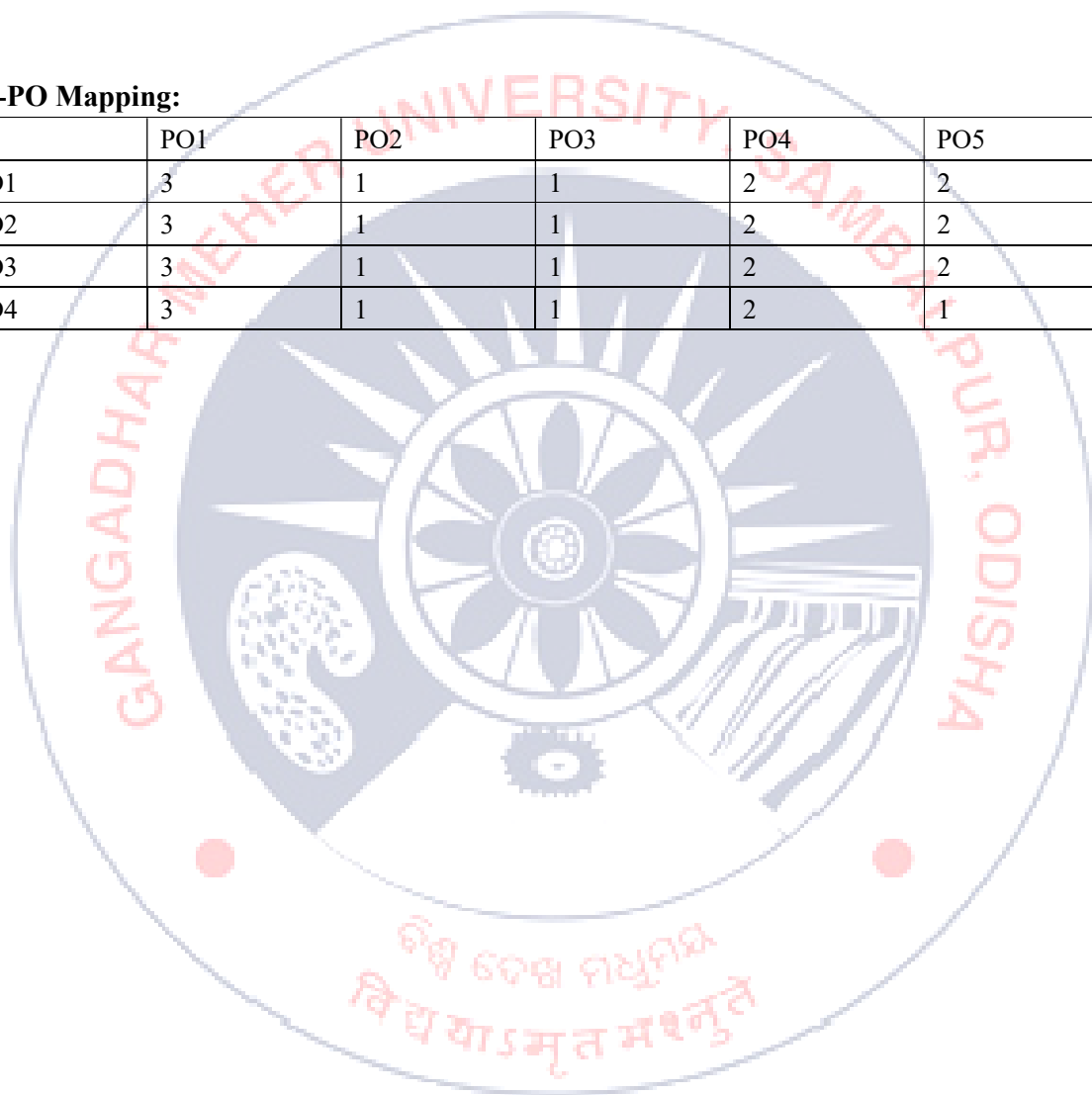
- Principles of Economics, Gregory N Mankiw, 6e Cengage Learning India Private Limited, New Delhi

Reference Book:

- Karl E. Case and Ray C. Fair (2007): *Principles of Economics*, 8th Edition, Pearson Education Inc.
- Pindyck, Robert and Daniel Rubinfeld (2018): *Microeconomics*, 9th Edition, Pearson Education Inc

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	1	2	2
CO2	3	1	1	2	2
CO3	3	1	1	2	2
CO4	3	1	1	2	1



Generic Elective Paper IV: INTRODUCTORY MACROECONOMICS

Introduction:

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 Objectives:

This course aims at imparting knowledge to the students about how the economy behaves at the aggregate level and how national income is measured and determined. Topics include an overview of macroeconomics including causes of its emergence, major macro-economic concerns, measuring gross domestic product, inflation etc. It will enable the students to develop a critical insight on classical and Keynesian macro-economic models.

Course Outcomes:

After successful completion of this course, students will be able to:

CO1: Understand basic concepts of macroeconomics.

CO2: Understand various concepts of national income, consumption functions, investment function, monetary policies and fiscal policies.

CO3: Articulate basic macroeconomic model for analysis of economic theory.

CO4: Compare and contrast different paradigms of macroeconomics.

Unit I: Basic Concepts in Macroeconomics

Macro vs. Micro Economics; Limitations of Macroeconomics ; Stock and Flow variables, Equilibrium and Disequilibrium, Partial and General Equilibrium Statics – Comparative Statics and Dynamics ; National Income Concepts – GDP, GNP, NDP and NNP at market price, factor cost, real and nominal; Disposable personal Income

Unit II: Measurement of Macroeconomic Variables

Output, Income and Expenditure Approaches ; Difficulties of Estimating National Income; National Income Identities in a simple 2- sector economy and with government and foreign trade sectors; Circular Flows of Income in 2, 3 and 4-sector; economies; National Income and Economic Welfare; Green Accounting

Unit III: Money and Changes in its Value

Evolution and Functions of Money, Quantity Theory of Money – Cash Transactions, Cash Balances and Keynesian Approaches, Value of Money and Index Number of Prices. Inflation – Meaning, Causes, and Anti-Inflationary Measures; Classical, Keynesian, Monetarist and Modern Theories of Inflation, Inflationary Gap, Deflation- Meaning, Causes, and Anti-Deflationary Measurers, Depression and Stagflation; Inflation vs. Deflation

Unit IV: Determination of National Income

The Classical Approach - Say's Law, Theory of Determination of Income and Employment with and without saving and Investment; Basics of Aggregate Demand and Aggregate Supply and Consumption- Saving – Investment Functions, The Keynesian Approach – Basics of Aggregate Demand and Aggregate Supply and Consumption, Saving, Investment Functions; The Principle of

Effective Demand; Income Determination in a Simple 2-Sector Model; Changes in Aggregate Demand and Income- The Simple Investment Multiplier

Text Book:

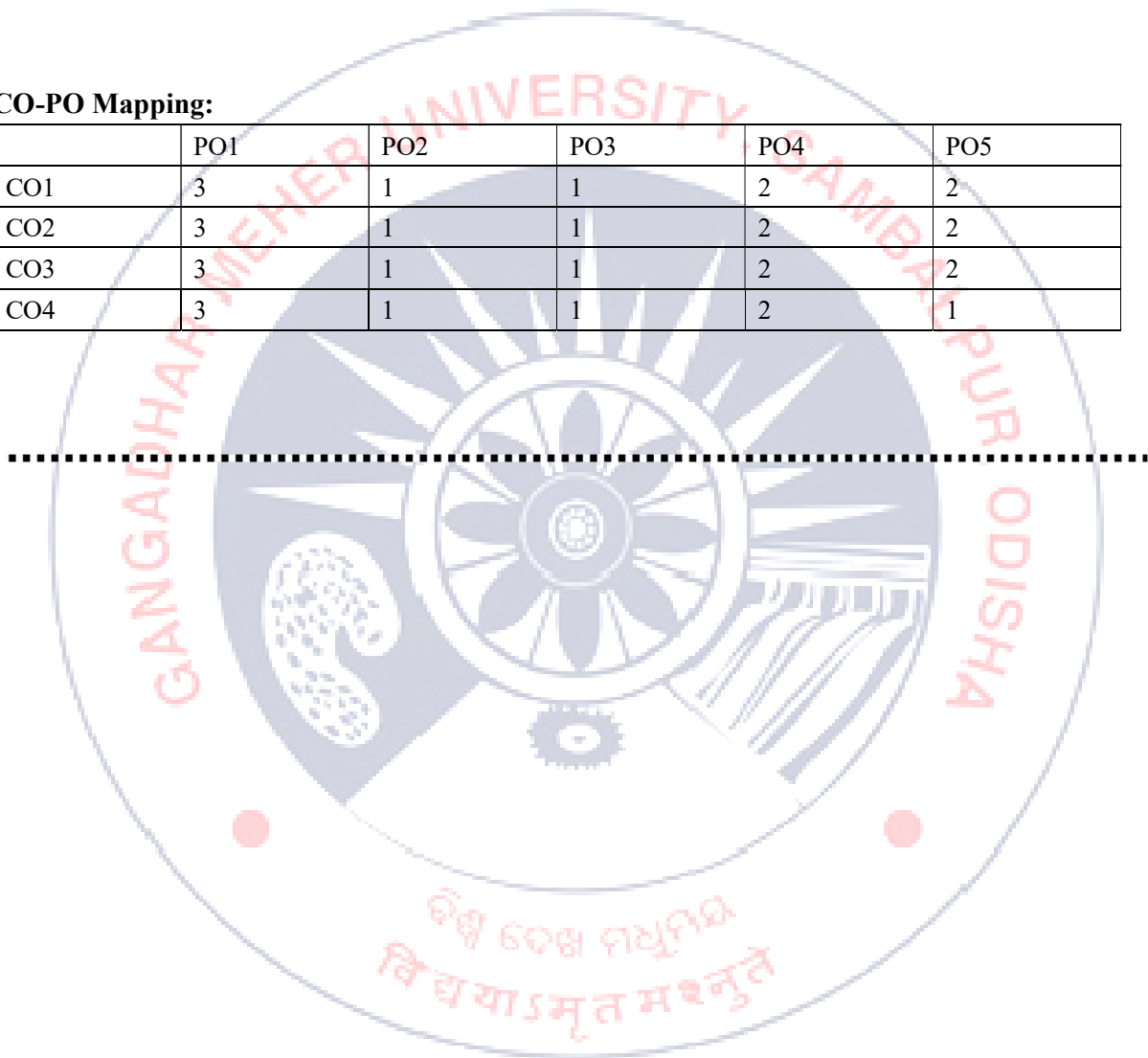
- N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:

- Richard T. Froyen (2005): *Macroeconomics*, 2nd Edition, Pearson Education Asia, New Delhi.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1	3	1	1	2	2
CO2	3	1	1	2	2
CO3	3	1	1	2	2
CO4	3	1	1	2	1



SKILL ENHANCEMENT COURSES (SEC)

Optional for SECC II paper

Total Marks- 100

Skill Enhancement Courses (SECC II Option-I): DATA ANALYSIS AND COMPUTER APPLICATION

Introduction:

The purpose of this course is to introduce basic computer skills to students at UG level in non- technical subjects. After completion of this course, the students are expected to acquire some basic knowledge about computers and to develop some basic skills in using computers for data storage, compilation, analysis and presentation.

Course Objective:

To impart basic computer skill within students

Course Outcomes:

After successful completion of this course, students shall be able to;

CO1: Understand basic concepts of Computers.

CO2: Understand various functions of excel, Database Management and Software Packages

CO3: Apply various functions of excel for economic analysis.

CO4: Use computer tools for presentation

Unit I: Introduction to Computers and Networks

Introduction to computer- Components of Computer System, concepts of Hardware and Software, Classifications of computers; Concepts of data processing, Basic data types, Storage of data/Information as files, operating system and The User Interface (windows, Linux), Windows Setting- Control Panels, Accessories (windows)

Basic of Computer networks- LAN and WAN, Internet, Service on Internet; WWW and Web Browsers, Web Browsing software, Surfing the Internet, Chatting on Internet, Email-Basic of electronic mail, Using Emails, Document handling in Email.

Unit II: Basic Word Processing

Introduction to Word Processing, Opening Word Processing Package, Opening and closing documents, Using a Document/Help Wizard, Text Creation and Manipulation, Formatting the Text, Handling Multiple Documents, Table Manipulation, Printing, saving documents in different formats

Unit III: Spreadsheets and Basic Data Analysis

Spread Sheet, Elements of Electronics Spread Sheet, Application/usage of Electronic Spread Sheet, Manipulation of cells, Formulas and functions; Spread sheets for Small accountings- maintaining invoices/budgets, basic practical data analysis works (Maintaining daily and monthly sales reports)

Unit IV: Basic Presentations

Basics- Difference between presentation and document, Using Power Point, Creation of Presentation, Preparation of Slides, Selection of type of Slides, Importing text from word documents, Providing aesthetics- Slide Designs, Slide Manipulation and Slide Show, Presentation of the Slide

Text Book:

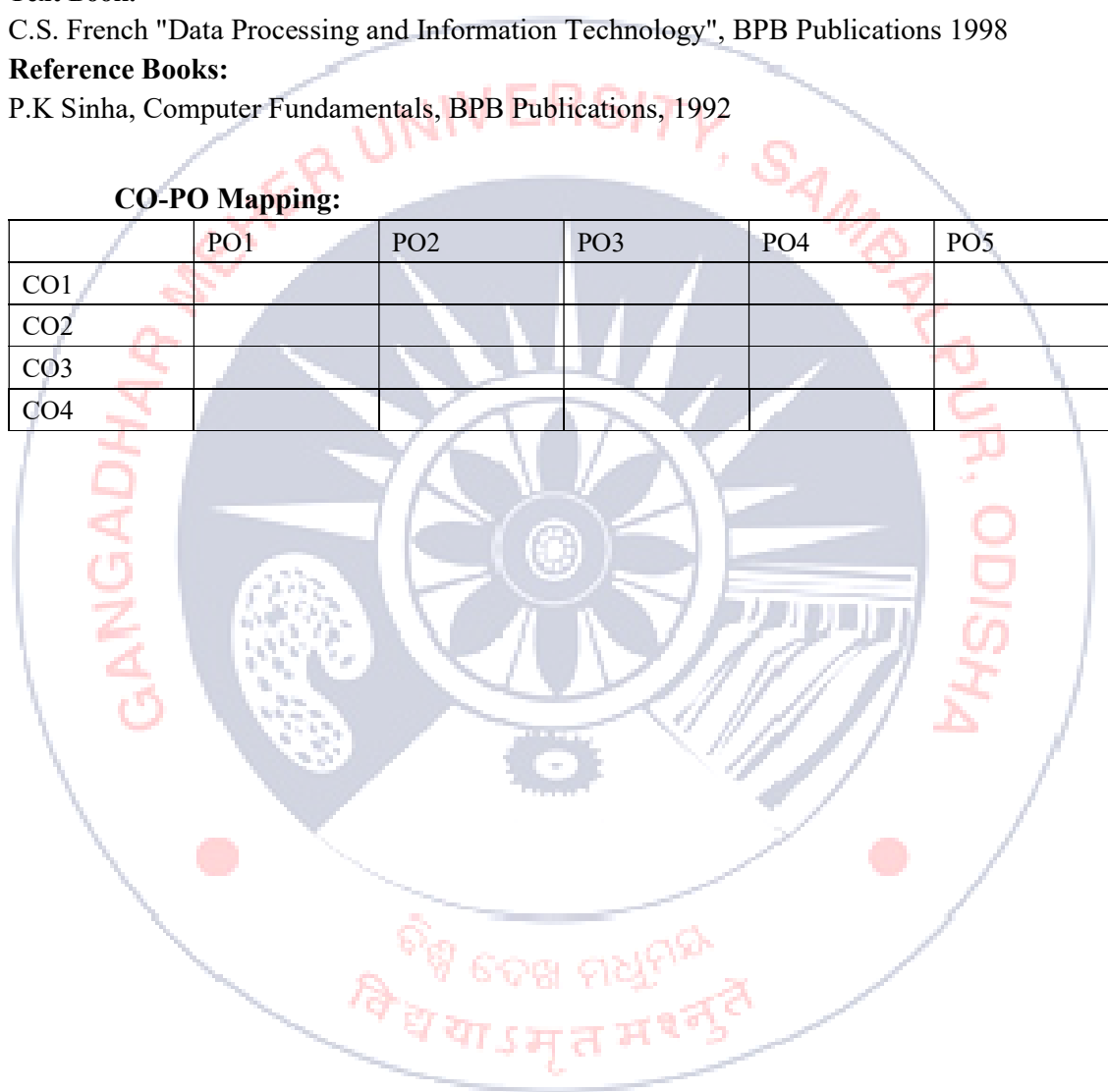
- C.S. French "Data Processing and Information Technology", BPB Publications 1998

Reference Books:

- P.K Sinha, Computer Fundamentals, BPB Publications, 1992

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1					
CO2					
CO3					
CO4					



Skill Enhancement Courses (SECC II Option-II): FINANCIAL ECONOMICS

Introduction:

This course intends to explain the ideas on financial system in India. It will help the students to enhance their knowledge on concepts like financial institutions, instruments and markets, their functioning and usage in real world.

Course Objective:

To develop an understanding of the functions and operations of the financial system of an economy.

Course Outcomes:

After the successful completion of the course, the student will be able to;

- CO1: Understand the basic concepts and financial markets.
- CO2: Comprehend how securities are priced and affected by the institutional arrangements in stock market and other government regulations,
- CO3: Understand and analyze the fundamental operations of financial markets and instruments.
- CO4: Estimate the value of the financial assets like bonds, securities etc. and able to interpret the company's financial ratios.

Unit I: Financial System

The structure of the financial system- Functions of the financial sector-Indicators of financial development; Financial System and Economic Development; financial inclusion: concept and its evolution; policy initiatives on financial inclusion.

Unit II: Interest Rate Policy

Theories of interest rate determination-Level of interest rates-Long period and short period rates- Administered interest rates; Deregulation of interest rates; financial sector reforms in India.

Unit III: Money and Capital Market

Money Market: features; objectives; and importance of money market; composition of money market; money market institutions and instruments; features and problems of Indian money market. Capital market: composition; Primary and secondary market for securities. Functions of new issue and secondary market; organizations of stock exchanges in India; defects in Indian stock exchange; SEBI; its objectives and functions

Unit IV: Non-Banking Financial Companies

Non-Banking Financial Companies: Hire purchase Companies-Venture Capital Companies. Insurance Sector: objectives, functions, life insurance and general insurance; IRDA and its role and functions in financial markets.

Text Book:

- L.M.Bhole: Financial institutions and Market, Tata McGraw hill, New Delhi.

Reference Books:

- Gorden & Natrajan: Financial Market and institutions, Himalaya Publishing house.

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5
CO1					
CO2					
CO3					
CO4					

