

SYLLABUS

GOLAGHAT COMMERCE COLLEGE (AUTONOMOUS)

FYUGP 2020



DEPARTMENT OF ECONOMICS

(Recommended by B.O.S. in Economics in its meetings held on 27/11/2024 and approved by Academic Council in its meeting held on 30/11/2024 and effective from the session, 2024-25)

PREAMBLE

As recommended by the University Grants Commission (UGC) and proposed for implementation by Golaghat Commerce College (Autonomous), the Department of Economics works to implement the relevant components of New Education Policy (NEP), 2020 for Four Year Under Graduate Program (FYUGP). The following facts are taken into consideration when designing the basic structure of the Under Graduate (UG) program:

- Flexibility to switch between disciplines of study
- Opportunity for learners to select the courses of their interest across all disciplines
- Flexible entry and exit options with UG certificates, UG diplomas, or Bachelor degrees depending on the number of credits earned
- Flexibility for students to switch between institutions so they can engage in multi- and/or interdisciplinary learning
- Flexibility to switch to alternative modes of learning
- Knowledge required for self-employment initiatives and entrepreneurship mindset
- Ability for complex critical thinking and real-life problem solving
- Capability to understand global issues, multicultural competence and digital literacy
- Capable on research skills, communication skills, community-based engagement, environment awareness, responsibility and accountability.

INTRODUCTION

The Under Graduate (UG) syllabus of Economics as recommended by the University Grants Commission (UGC) and the New Education Policy (NEP), 2020 consists of Major (Core) disciplines, Minor disciplines, Multi-Disciplinary Generic Elective Courses (MDGEC), Ability Enhancement Courses (AEC), Value Added Courses (VAC), Skill Enhancement Courses (SEC), Environmental Education (EE), Community Based Engagement (NCC/NSS/Adult Education/Student Mentoring/NGO/Govt. institutions, etc.), Digital Fluency (DF), Research Ethics and Methodology, Research Project (Development of Project/Research Proposal, Review of related literature), Dissertation (Collection of Data, Analysis and Preparation of Report) and Discipline Specific Electives (DSE).

AIM

The UG Programme in Economics aims to develop students' analytical, logical, and critical thinking skills so they can apply economic reasoning in practical settings. Students who pursue a UG degree in Economics will be exposed to a wide range of fascinating theoretical and applied concepts that will aid in their preparation for a range of Economics-related jobs in business, government, industry, commerce, finance, and research. A wide range of theoretical and practical topics of Economics are covered in the programme. Along with Economics, the programme also aims to broaden students' knowledge of other subjects that cut across disciplines, such as sociology, history, maths, and statistics. They will be able to use the skills they have learned to situations that happen in the real world by selecting papers from the MDGEC, AEC, SEC, VAC, YOGA, EE, DTS, DSE, community-based engagement, etc. Enhancing the ability of students to switch between academic disciplines, institutions, and alternative modes of learning is another goal. The programme aims to inculcate economic thinking among the students in economic decision making by comprehending economic theory. It aims to develop analytical view point among the students about the economic behaviour of people. The objective is to nurture among student a view point of a socially responsible and ethical aware citizen.

GRADUATE ATTRIBUTES

Disciplinary Knowledge

Being able to demonstrate thorough knowledge and coherent understanding of the theoretical as well as applied aspects of Economics along with the interdisciplinary fields of study that have been chosen in a broad multidisciplinary context; being able to link relevant disciplines and modern innovations with the learning disciplines of choice.

Critical Thinking

Ability to identify gaps and logical flaws in arguments; Capability to analyse and synthesise theoretical and applied problems; Capability to acquire knowledge and skills through logical reasoning, analytical thinking, and evaluations; instill a positive outlook on lifelong learning. Problem Solving Ability to work independently and conduct extensive research to identify how Economics is used in various facets of life; ability to use creative and innovative thinking and interpersonal skills; ability to take on a variety of challenges in both familiar and unfamiliar settings, and apply what they have learned to real-world scenarios.

Communication Skills

The ability to use mathematics, statistics, and econometrics effectively as precise languages of communication in Economics; the ability to clearly communicate a variety of economic concepts through computation, graphics, examples, and their geometrical representations; the capacity to pay close attention, read texts and research papers critically; and the capacity to communicate complex information clearly and concisely in a variety of settings.

Research Related Skills

The capacity to develop methodology and research proposals, or to be specific, the capacity to develop pertinent research questions and hypotheses for various branches of Economics as well as other related disciplines; the capacity to present findings, theories, methods, and proofs using knowledge from various branches of Economics and other related disciplines.

Reflective Thinking

Understanding how a researcher/investigator makes use of the information one collects; the capacity to formulate pertinent inquiries regarding the relevant issues in different branches of Economics for inventing and discovering new solutions using the domain knowledge of Economics; the capacity to interpret the findings and use them to solve a variety of problems in various fields of Economics as well as in real-life situations.

Information/Digital Literacy

The capacity to use information and communication technology (ICT) tools and to access, evaluate, and utilize these tools. Ability of comprehending, reading, and using computational methods in relevant disciplines.

Moral and Ethical Awareness/Reasoning

Ability to recognise ethical issues that are important to one's work and to pledge not to act unethically, such as with plagiarism, copyright infringements, or other violations of intellectual property rights; ability to appreciate recent advancements in various fields with honesty and integrity in all aspects.

Multicultural Competence

Capability to collaborate research in various fields of Economics with other researchers from a variety of backgrounds and organizations; capability of effective cooperation and participation in a multicultural setting and effective interaction with diverse groups; knowledge of the values and beliefs of multiple cultures; and a global view to honour diversity.

Cooperation/Team Work

Capacity to work effectively and respectfully with diverse teams; ability to work with individuals from different backgrounds in the interests of a common objective.

PROGRAMME OUTCOMES (POs): After completion of this programme –

PO1-Critical Thinking: Graduates will be able to critically analyze economic theories and models, apply logical reasoning, and understand their implications in real-world contexts.

PO2-Problem Solving: Graduates will acquire enhanced problem-solving skills by applying economic principles and quantitative techniques to address economic issues and policy challenges.

PO3-Effective Communication: Graduates will be able to communicate economic concepts, theories, and findings clearly and effectively.

PO4-Research and Analytical Skills: Graduates will be able to formulate research proposals, specifically to craft relevant research questions and hypotheses; present findings, theories, methods, and proofs utilizing knowledge from multiple branches of Economics and associated fields.

PO5-Technological Proficiency: Graduates will be proficient in using modern technological tools and software for economic analysis, data management, and presentation.

PO6-Ethical Awareness: Graduates will be able to apply ethical principles in economic decision-making, recognizing the societal and environmental impacts of economic activities.

PO7-Global Perspective: Graduates will develop a global outlook on economic issues, understanding the interconnectedness of economies and the implications of global economic policies and events.

PO8-Lifelong Learning: Graduates will foster a commitment to continuous learning and staying updated with the latest developments in the field of economics.

PO9-Interdisciplinary Knowledge: Graduates will be able to integrate knowledge from various disciplines such as statistics, mathematics, political science, sociology, history etc. to provide a comprehensive understanding of economic phenomena.

PO10-Leadership and Teamwork: Graduates will cultivate leadership qualities and the ability to work collaboratively in diverse teams to address complex economic problems.

PROGRAMME SPECIFIC OUTCOMES (PSOs):

The objective of the UG Program in Economics is to help students become more analytical, logical, and critical thinkers so they can use economic reasoning in real-world situations. A bachelor's degree in economics exposes students to a broad range of intriguing theoretical and applied topics that will help them prepare for a variety of economics-related careers in government, business, industry, commerce, finance, and research. The curriculum covers a broad range of economics-related theoretical and applied issues. It seeks to foster in the pupils an analytical perspective on human economic behaviour. The goal is to install in them the perspective of an ethically conscious and socially conscious citizen. The programme specific outcomes of the Undergraduate Programme in Economics are listed below. After completing the programme the students should be able to-

PSO1-Comprehend the behavioral patterns of different economic agents and acquire the competency to apply the fundamentals of Microeconomics and Macroeconomics in understanding the economic aspects of allied sectors.

PSO2-Evaluate the developmental parameters of an economy with the help of economic theories and examine the existing socio-economic issues of developing nations and formulate strategies to pave the way for further development.

PSO3- Analyse and review the historical developments in the economic thoughts propounded by different schools and make a comparative assessment with the contemporary issues in Economics.

PSO4-Identify key issues and formulate ideas to undertake research studies and apply quantitative techniques to address the unresolved issues in Economics and other relevant disciplines.

PSO5-Demonstrate the potential for a variety of challenging careers through innovation, critical thinking, problem solving and lifelong learning, thereby being competitive in the job market by acquiring skills in using statistical software for research, employability and entrepreneurship.

PSO6-Contribute to the academic advancement of the subject and society at large by pursuing advanced studies in Economics.

TEACHING LEARNING PROCESS:

The programme allows using varied pedagogical methods and techniques both within classroom and beyond.

- Lecture
- Tutorial
- Power point presentation
- Documentary film on related topic
- Project Work/Dissertation
- Group Discussion and debate Seminars/workshops/conferences
- Field visits and Report/Excursions Mentor/Mentee

ASSESSMENT

- Home assignment
- Project Report
- Class Presentation: Oral/Poster/Power point
- Group Discussions
- In semester examinations
- End Semester examinations

**DRAFT STRUCTURE OF FOUR YEAR UNDER GRADUATE PROGRAMMES (FYUGP) IN GOLAGHAT COMMERCE COLLEGE
(AUTONOMOUS) AS PER UGC DRAFT RELEASED on 12/12/2022**

Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
1st	1st	Major (Core)	1	ECOMAJ1	Introductory Microeconomics	4	-
		Minor	1	ECOMIN1	Elementary Microeconomics	4	The course shall be taken by students from discipline other than Economics
		Multi- Disciplinary Generic Elective Course: Natural Science- II/ Social Science/ Humanities–II/ Commerce-II	1	ECOGEC1	Basics of Microeconomics	3	The course shall be taken by students from discipline other than Economics
		AEC Language	1			4	Students shall have to take one of the language disciplines offered by the college
		Value Added Course- Understanding India/ Health and	1	VAC1/ VAC2		2	Students shall have to take any one of the courses offered by the college
		Skill Enhancement Course	1	ECOSEC1	Data Collection and Presentation-I	3	Students shall have to take the course offered by the college
		Total				20	

Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
1	2 nd	Major (Core)	1	ECOMAJ2	Introductory Macroeconomics	4	-
		Minor	1	ECOMIN2	Elementary Macroeconomics	4	The course shall be taken by students from disciplines other than Economics
		Multi- Disciplinary Generic Elective Course: Natural Science –II /Social Science/Humanities–II/Commerce-II	1	ECOGEC2	Basics of Macroeconomics	3	The course shall be taken by students from disciplines other than Economics
		AEC: Language and Communication Skills(English)-II	1			4	
		Value Added Course- Environmental Education with emphasis on community-based activities/ Yoga	1	VAC 3/ VAC4		2	Students shall have to take any one of the courses offered by college
		Skill Enhancement Course	1	ECOSEC2	Data Collection and Presentation-II	3	Students shall have to take the course offered by college
		Total				20	
Grand Total (Semester I and II)						40	
Students on exit shall be awarded Undergraduate Certificate (in the Field of Study/Discipline) after securing the requisite 40 Credits in Semesters I and II							

Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
2	3 rd	Major	2	ECOMAJ3A	Mathematical Methods for Economics I	4	-
				ECOMAJ3B	Issues of Indian Economy	4	-
		Minor	1	ECOMIN3	Basics of Indian Economy	4	The course shall be taken by students from disciplines other than Economics
		Multi- Disciplinary Generic Elective Course: Natural Science/Social Science/Humanities -III/Commerce-III	1	ECOGEC3	Economy of India and Assam	3	The course shall be taken by students from disciplines other than Economics
		Value Added Course-Digital and Technological Solutions/Digital Fluency	1	VAC 5/ VAC 6		2	Students shall have to take the course offered by college
		Skill Enhancement Course	1	ECOSEC3	Data Analysis and Interpretation	3	Students shall have to take the course offered by college
		Total				20	
Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
2	4 th	Major	4	ECOMAJ4A	Advanced Microeconomics	4	-
				ECOMAJ4B	Development Economics	4	
				ECOMAJ4C	Mathematical Methods for Economics II	4	
				ECOMAJ4D	Public Finance	4	
		Minor	1	ECOMIN4	Fundamental Mathematics for Economics	4	The course shall be taken by students from disciplines other than Economics
		Total				20	
Grand total (Semester I, II, III and IV)						80	
Students on exit shall be awarded Undergraduate Diploma (in the Field of Study/Discipline) after securing the requisite 80 Credits in Semesters I, II, III and IV							

Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
3	5th	Major	4	ECOMAJ5A	Statistical Methods for Economics	4	
				ECOMAJ5B	International Economics	4	
				ECOMAJ5C	Monetary Economics and Financial Market	4	
				ECOMAJ5D	Internship/ Project		
		Minor		ECOMIN5	Development Economics	4	The course shall be taken by students from disciplines other than Economics
		Total				20	
Year	Semester	Course (Lecture+Tutorial+Practical)	No. of Courses	Course Code	Name of the Course	Credit	Remarks
3	6th	Major		ECOMAJ6A	Environmental Economics	4	
				ECOMAJ6B	History of Economic Thought	4	
				ECOMAJ6C	Economy of Assam	4	
				ECOMAJ6D	Basic Econometrics	4	
		Minor		ECO/MIN6	Public Finance	4	The course shall be taken by students from disciplines other than Economics
		Total				20	
Grand Total (Semester I, II, III, IV, V and VI)						120	
Students on exit shall be awarded Undergraduate Degree (in the Field of Study/Discipline) after securing the requisite 120 Credits in Semesters I, II, III, IV, V and VI							

FYUGP (NEP) 1ST SEMESTER SYLLABUS

Course Title	:	Introductory Microeconomics
Course Code	:	ECOMAJ1
Nature of Course	:	Major
Total Credits	:	4 credits
Distribution of Marks	:	60 (End-Sem.) + 40 (In-Sem.)

Course Objectives:

1. To expose students to the basic principles of microeconomic theory
2. To enlighten the learners about the fundamental economic trade-offs and allocation problems due to scarcity of resources

Course Outcomes: On completion of this course, a student will be able to-

CO 1: Comprehend the introductory principles of Microeconomics.

LO 1.1: Define the meaning of Microeconomics.

LO 1.2: Discuss how scarcity and the need to make choices are central to economic analysis.

LO 1.3: Identify and analyze the trade-offs and opportunity costs in decision-making processes.

CO 2: Apply the basics of microeconomics in behaviour patterns of firms and households and relate with the laws of demand and supply.

LO 2.1: Explain the law of demand, determinants of demand, individual and market demand and shift in demand.

LO 2.2: Explain the law of supply, determinants of supply, individual and market supply and shift in supply.

CO 3: Apply the fundamentals of microeconomics to understand the behaviour of consumers and attainment of consumer's equilibrium.

LO 3.1: Define budget constraint.

LO 3.2: Explain the meaning and properties of an Indifference curve.

CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues.

LO 4.1: Define the concept of production function in relation to cost and revenue.

CO 5: Demonstrate the basics of market mechanism and characteristics of different forms of markets.

LO 5.1: Discuss the features of different forms of markets.

LO 5.2: Explain the equilibrium condition of firms under perfect competition.

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-10)	Exploring the subject matter of Economics: Why study economics? Scope and method of economics; Scarcity and choice; Types of Microeconomic Analysis, Goals of Microeconomics-Growth and Efficiency; The economic problems: the question of what to produce, how to produce and how to distribute output; Economic models: Verification and general features of economic models; Applications of microeconomics.	8	2	-	10

II (Marks-14)	<p>Consumer and Producer Behaviour:</p> <p>Utility: Cardinal and Ordinal Approach, Indifference Curve- Properties of Indifference curve, Budget Constraints, Consumer's Equilibrium; Price effect, Substitution and Income effect of a price change- for Normal, Inferior and Giffen goods; derivation of the demand curve using Indifference curve approach.</p> <p>Production Function, production function with one variable input and with two variable inputs; choice of technology (labour intensive, intermediate and Capital-intensive techniques), isoquant and iso-cost lines, cost minimizing equilibrium condition.</p>	10	4	-	14
III (Marks-12)	<p>Supply and Demand:</p> <p>Concept of Demand/Supply, determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.</p>	9	3	-	12
IV (Marks-12)	<p>Concept of Cost and Revenue:</p> <p>Theory of Cost: Traditional theory of cost- short-run cost curves and their interrelationships, Long-run costs: the Envelope Curve, Modern theory of Cost, Economies and diseconomies of scale.</p> <p>Theory of Revenue: Total, Average and Marginal Revenue, relation between average and marginal revenue.</p>	9	3	-	12
V (Marks-12)	<p>Firm and Market Structure:</p> <p>Theory of Firm: equilibrium condition of firm. Concept of market;</p> <p>Perfect competition, assumption, equilibrium of a firm and industry under perfect competition in the short-run and long-run.</p> <p>Imperfect Market Structure: price and output determination under monopoly and monopolistic competition, the concept of oligopoly.</p>	9	3	-	12
TOTAL =60		45	15	-	60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

Suggested Readings:

- Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
- Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
- G.S. Maddala and Ellen Miller, Microeconomics: Theory and Applications, McGraw Hill Education, Tenth Reprint, 2013, New Delhi Edition
- R.S. Pindyck, D.N. Rubinfeld and P.L. Meheta (2009): Microeconomics, 7th Edition, Pearson, New Delhi
- McConnell, Brue and Flynn, Microeconomics: Principles, Problems, and Policies, McGraw Hill Education (India) Private Limited, 2017
- Bharali Ranjukumar, Dutta Sanjib, Byastigata Arthanitir Porichoy
- Bora Arindam, Byastigata Arthabigyan

FYUGP (NEP) 1ST SEMESTER SYLLABUS

Course Title	:	Elementary Microeconomics
Course Code	:	ECOMIN1
Nature of Course	:	Minor
Total Credits	:	4 credits
Distribution of Marks	:	60 (End-Sem.) + 40 (In-Sem.)

Course Objectives:

1. To expose students to the basic principles of microeconomic theory
2. To enlighten the learners about the fundamental economic trade-offs and allocation problems due to scarcity of resources

Course Outcomes: on completion of this course, a student will be able to-

CO 1: Comprehend the introductory principles of Microeconomics.

LO 1.1 Describe the meaning of Microeconomics.

LO 1.2 Define the meaning of scarcity and opportunity cost.

LO 1.3: Explain the law of demand, determinants of demand, shifts of demand versus movements along a demand curve and market demand.

LO 1.4: Explain the law of supply, determinants of supply, shifts of supply versus movements along a supply curve and market supply.

LO 1.5: Explain the condition of market equilibrium.

CO 2: Apply the fundamentals of microeconomics to understand the behaviour of consumers and attainment of consumer's equilibrium.

LO 2.1: Define the meaning of budget constraint.

LO 2.2: Explain the meaning and properties of indifference curve.

LO 2.3: Explain the fundamentals of utility and its applications in consumer theory.

CO 3: Apply the fundamentals of microeconomics to understand the behaviour of producers and attainment of producer's equilibrium.

LO 3.1: Explain the Production function with one and two variables.

LO 3.2: State the meaning and properties of an Isoquant and equilibrium in production

CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues

LO 4.1: Explain the features of cost and revenue in the short run and long run respectively.

CO 5: Demonstrate the basics of market mechanism and characteristics of different forms of markets.

LO 5.1: Discuss the features of different forms of markets.

LO 5.2: Explain the equilibrium condition of firms under perfect competition.

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-12)	Introduction What is Microeconomics; Problem of scarcity and choice; opportunity cost, production possibility frontier; economic systems. Demand and supply: law of demand, determinants of demand, market demand, law of supply, determinants of supply, market supply, shifts in demand and supply curves, market equilibrium; Elasticity of demand and supply; types of elasticity (price, income and cross) ; percentage method of calculating elasticity.	9	3	-	12

II (Marks-12)	Consumer Theory Utility: Cardinal and Ordinal Approach, Indifference Curve- Properties of Indifference curve, Budget Constraints, Consumer's Equilibrium; Price effect, Substitution and Income effect of a price change- for Normal, Inferior and Giffen goods; derivation of the demand curve using Indifference curve approach.	9	3	-	12
III (Marks-12)	Cost and Revenue Analysis Concept of cost, types of cost, relationship between Average Cost and Marginal Cost, Short run and long run cost curves. Theory of Revenue: Total, Average and Marginal Revenue, relation between average revenue and marginal revenue	9	3	-	12
IV (Marks-12)	Producer's Behaviour Concept of Production; production functions, Law of Variable Proportion, Return to Scale, isoquant and iso-cost lines, cost minimizing equilibrium conditions	9	3	-	12
V (Marks-12)	Theory of firm: price and output determination Theory of Firm: equilibrium condition of firm, concepts of market, (perfect competition, monopoly, monopolistic, oligopoly); price and output determination under perfect competition: short run and long run.	9	3	-	12
TOTAL= 60		45	15	-	60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

Suggested Readings:

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- Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

- G.S. Maddala and Ellen Miller, Microeconomics: Theory and Applications, McGraw Hill Education, Tenth Reprint, 2013, New Delhi Edition
- McConnell, Brue and Flynn, Microeconomics: Principles, Problems, and Policies, McGraw Hill Education (India) Private Limited, 2017
- Bharali Ranjukumar, Dutta Sanjib, Byastigata Arthanitir Porichoy
- Bora Arindam, Byastigata Arthabigyan
- Gogoi Baruah Minoti, Neog Brojen Ch, Bora Arindam, Mahanta Hazarika Bidisha, Hira Bisitra, Byastigata Arthabigyan Tatta Porisoy

FYUGP (NEP) 1ST SEMESTER SYLLABUS

Course Title	:	Basics of Microeconomics
Course Code	:	ECOGEC1
Nature of Course	:	Generic Elective
Total Credits	:	3 credits
Distribution of Marks	:	45 (End-Sem.) + 30 (In-Sem.)

Course Objectives:

1. To expose students to the basic principles of microeconomic theory
2. To enlighten the learners about the fundamental economic trade-offs and allocation problems due to scarcity of resources

Course Outcomes: on completion of this course, a student will be able to-

CO 1: Comprehend the introductory principles of Microeconomics.

LO 1.1 Describe the meaning of Microeconomics.

LO 1.2 Define the meaning of scarcity and opportunity cost.

CO 2: Apply the basics of microeconomics in behaviour patterns of firms and households and relate with the laws of demand and supply.

LO 2.1: Explain the law of demand, determinants of demand, shifts of demand versus movements along a demand curve and market demand.

LO 2.2: Explain the law of supply, determinants of supply, shifts of supply versus movements along a supply curve and market supply.

LO 2.3: Explain the condition of market equilibrium.

CO 3: Apply the fundamentals of microeconomics to understand the behaviour of consumers and producers and attainment of producer's and consumer's equilibrium.

LO 3.1: Define the meaning of budget constraint.

LO 3.2: Explain the meaning and properties of indifference curve.

LO 3.3: Explain the fundamentals of utility and its applications in consumer theory.

LO 3.4: Explain the Production function with one and two variables.

LO 3.5: State the meaning and properties of an Isoquant and equilibrium in production.

CO 4: Apply the principles of microeconomics in relation to production function, costs and revenues

LO 4.1: Explain the features of cost and revenue in the short run and long run respectively.

UNITS	Course contents	L	T	P	Total Hours
I (Marks-10)	Introduction Approaches to Economics; Microeconomics and Macroeconomics, Definition, subject matter and Scope of Microeconomics,	9	1		10
II (Marks-10)	Demand and Supply Concept of demand and supply, laws of Demand and Supply: Individual and Market Demand and Supply: Market Equilibrium and the impact of changes in demand and supply: price elasticity of demand and supply and their types	9	1		10

III (Marks-15)	Consumer Behavior and Producer Behavior Theory of Consumer Behavior: Utility Analysis-Cardinal utility theory, Indifference Curves Theory: Assumptions and Properties of Indifference curves; Budget Constraints and Equilibrium of the Consumer. Theory of Production: Production function and its types, law of variable proportion, iso quant, laws of return to scale.	13	2		15
IV (Marks-10)	Theory of Cost and Revenue Concepts of cost, types of cost, relationship between Average Cost and Marginal cost Concept of revenue; Total, Average and Marginal Revenue, relation between average and marginal revenue.	10			10
TOTAL=45			-	-	45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 30 Marks

- Two Internal Examinations - **15 Marks**
- Attendance - **05 Marks**
- Others (Any tow) - **10 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

Suggested Readings:

- Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
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- G.S. Maddala and Ellen Miller, Microeconomics: Theory and Applications, McGraw Hill Education, Tenth Reprint, 2013, New Delhi Edition
- R.S. Pindyck, D.N. Rubinfeld and P.L. Meheta (2009): Microeconomics, 7th Edition, Pearson, New Delhi
- McConnell, Brue and Flynn, Microeconomics: Principles, Problems, and Policies, McGraw Hill Education (India) Private Limited, 2017
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- Bora Arindam, Byastigata Arthabigyan
- Gogoi Baruah Minoti, Neog Brojen Ch, Bora Arindam, Mahanta Hazarika Bidisha, Hira Bisitra, Byastigata Arthabigyan Tatta Porisoy

FYUGP (NEP) 1st SEMESTER SYLLABUS

Course Title: Data Collection and Presentation-I

Course Code: ECOSEC1

Nature of Course: Skill Enhancement Course

Total Credits: 3 credits

Distribution of Marks: 45 (End-Sem.) + 30 (In-Sem.)

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-10)	<p>Introduction to data and data collection Meaning and definition of data, its types and different scales of measurement (nominal, ordinal, interval, ratio) Purpose of data collection- Understanding why data is gathered, its role in research, decision-making and problem solving, differentiating between primary and secondary data and their respective sources and characteristics</p>	10			10
II (Marks-10)	<p>Primary data collection: Surveys and questionnaire- designing effective questionnaire, administrating them and analyzing the result Interviews- conducting structured or unstructured interviews, recording responses and interpreting findings Observation- observing phenomenon in a natural setting, recording data and ensuring objectivity Experiments- designing and conducting experiments, controlling variables and analyzing outcomes Focus groups- facilitating group discussion, recording insights, and analyzing patterns</p>	10			10
III (Marks-10)	<p>Secondary data collection: Identifying sources- utilizing govt publication, academic journals, industry reports and online data basis Data validation and reliability- evaluating the credibility of data sources and ensuring data accuracy</p>	10			10
IV (Marks-15)	<p>Practical Choosing a topic and preparing the questionnaire on the basis of the topic</p>			15	15
TOTAL =45		30		15	45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 30 Marks

- Two Internal Examinations - **15 Marks**

- Attendance - **05 Marks**
- Others (Any tow) - **10 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

FYUGP (NEP) 2nd SEMESTER SYLLABUS

Course Title	:	Introductory Macroeconomics
Course Code	:	ECOMAJ2
Nature of the Course	:	Major
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To help students know the meaning of macroeconomics and how the overall production of economy is computed;
2. To familiarize the students with concepts of aggregate demand and aggregate supply;
3. To introduce the students with the classical and Keynesian theories of employment and output determination;
4. To help students understand the meanings of inflation and other concepts related to inflation.

Course Outcomes: after successful completion of this course, students will be able to-

CO1: Distinguish between different macroeconomic schools of thought and understand the fundamental objectives and scope of macroeconomics, laying the foundation for advanced macroeconomic analysis.

LO1.1: Differentiate between microeconomics and macroeconomics and understand the evolution of macroeconomics as a distinct field.

LO1.2: Explain the nature and scope of macroeconomics and identify the key objectives of macroeconomic study.

LO1.3: Compare and contrast the different schools of macroeconomic thought: classical, Keynesian, and monetarist.

LO1.4: Analyze the relationship between microeconomic thinking and macroeconomic models and discuss the balance between short-term stabilization and long-term economic growth.

CO2: Define national income and various accounting methods, and assess the limitations and significance of GDP as an indicator of economic health and social welfare.

LO2.1: Understand the importance of measuring economic activity and the various approaches to national income accounting.

LO2.2: Define and differentiate between GDP and GNP, and explain the concepts of stocks and flows.

LO2.3: Describe the circular flow of income in an economy and the methods of measuring GDP: income method, expenditure method, and value-added method.

LO2.4: Evaluate the limitations of GDP as a measure of economic activity, including its relationship with the underground economy and social welfare, and understand the significance of sustainable accounting.

CO3: Analyze the components and determinants of aggregate demand and aggregate supply, and understand how these factors interact to influence overall economic activity.

LO3.1: Define aggregate demand and its components, and identify the determinants of consumption, government spending, firm investment, and net exports.

LO3.2: Explain the consumption function, including marginal propensity to consume (MPC) and average propensity to consume (APC), and the determinants of saving, including marginal propensity to save (MPS) and average propensity to save (APS).

LO3.3: Analyze the investment function and the factors that influence investment demand.

LO3.4: Describe the concept of aggregate supply, its determinants, and the factors that can shift the aggregate supply curve.

CO4: Critically evaluate the classical and Keynesian theories of output and employment determination, and apply these concepts to understand historical and contemporary economic fluctuations.

LO4.1: Understand the classical theory of output and employment determination and Say's law of markets.

LO4.2: Analyze the Great Depression of the 1930s and the failure of the classical school, leading to the Keynesian revolution.

LO4.3: Explain the Keynesian theory, including the equality between output and aggregate demand, the concept of the multiplier, and the determination of equilibrium income.

LO4.4: Discuss the changes in equilibrium income and the factors that can lead to such changes.

CO5: Elaborate the role of money in the economy and the causes and effects of inflation.

LO5.1: Discuss the quantity theory of money and its implications for prices and inflation.

LO5.2: Analyze the causes and types of inflation, its social costs and benefits, and the relationship between nominal and real interest rates.

UNITS	CONTENTS	L	T	P	Total Hours
I (Marks-10)	Introduction Microeconomics vs Macroeconomics; Evolution of Macroeconomics as a separate discipline; Nature and scope of macroeconomics; Objectives of Macroeconomics – short term vs long run, economic growth vs stabilization.	10			10
10 (Marks-14)	National Income Accounting Measuring the value of economic activity and its importance; Meaning of GDP and GNP; Stocks and flows; Circular flow in an economy; Approaches to measuring GDP – Income method, expenditure method, and value-added method; GDP deflator; Real GDP vs Nominal GDP; GDP and the underground economy; GDP and Social welfare.	12	2		14
III (Marks-14)	Aggregate Demand and Aggregate Supply Concept of aggregate demand; Components and determinants of aggregate demand – consumption, government spending, investment spending, and net exports; Consumption function – MPC and APC; Saving – determinants of saving – MPS and APS; Investment – determinants of investment; investment function; Concept of Aggregate supply; determinants of aggregate supply; factors shifting aggregate demand curve, the concept of multiplier, equilibrium income, changes in equilibrium income.	12	2		14
IV (Marks-12)	Determination of output and employment The classical theory; Say's law of markets; The Great Depression of 1930s – failure of classical school and the Keynesian revolution; the Keynesian theory – equality between output and aggregate demand.	12			12
V (Marks-10)	Inflation and Deflation Inflation, meaning, types, causes and effects; demand-pull and cost-push inflation; Hyperinflation, cost of hyperinflation; Inflationary gap. Deflation- meaning, effects, inflation vs deflation; Anti-inflationary measures- monetary policy and fiscal policy.	10			10
Total=60	Total				60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

SUGGESTED READINGS:

- Dornbusch, R., Fischer, S. & Startz, R. (2018). *Macroeconomics* (12thed.). McGraw Hill Education
- Froyen, R.T. (2014). *Macroeconomic Theories and Policies* (10thed.). Pearson Education
- Mankiw, N.G. (2007). *Macroeconomics* (6th ed.). Worth Publishers
- Sikdar, S. (2006). *Principles of Macroeconomics*. Oxford University Press
- Bharali Ranjukumar, Dutta Sanjib, Samastigata Arthanitir Porichoy
- Bora Arindam, Samastigata Arthabigyan Porichai
- Ahmed Dr. Rofique, Rabha Dr. Rima, Adhunik Samastigata Arthabigyan

FYUGP (NEP) 2nd SEMESTER SYLLABUS

Course Title	:	Elementary Macroeconomics
Course Code	:	ECOMIN2
Nature of the Course	:	Minor
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To help students know the meaning of macroeconomics and how the overall production of economy is computed;
2. To familiarize the students with concepts of aggregate demand and aggregate supply;
3. To introduce the students with the classical and Keynesian theories of employment and output determination;
4. To help students understand the meanings of inflation and other concepts related to inflation.

Course Outcomes: after successful completion of this course, students will be able to-

CO1: Distinguish between different macroeconomic schools of thought and understand the fundamental objectives and scope of macroeconomics, laying the foundation for advanced macroeconomic analysis.

LO1.1: Differentiate between microeconomics and macroeconomics and understand the evolution of macroeconomics as a distinct field.

LO1.2: Explain the nature and scope of macroeconomics and identify the key objectives of macroeconomic study.

LO1.3: Compare and contrast the different schools of macroeconomic thought: classical, Keynesian, and monetarist.

LO1.4: Analyze the relationship between microeconomic thinking and macroeconomic models and discuss the balance between short-term stabilization and long-term economic growth.

CO2: Define national income and various accounting methods, and assess the limitations and significance of GDP as an indicator of economic health and social welfare.

LO2.1: Understand the importance of measuring economic activity and the various approaches to national income accounting.

LO2.2: Define and differentiate between GDP and GNP, and explain the concepts of stocks and flows.

LO2.3: Describe the circular flow of income in an economy and the methods of measuring GDP: income method, expenditure method, and value-added method.

LO2.4: Evaluate the limitations of GDP as a measure of economic activity, including its relationship with the underground economy and social welfare, and understand the significance of sustainable accounting.

CO3: Analyze the components and determinants of aggregate demand and aggregate supply, and understand how these factors interact to influence overall economic activity.

LO3.1: Define aggregate demand and its components, and identify the determinants of consumption, government spending, firm investment, and net exports.

LO3.2: Explain the consumption function, including marginal propensity to consume (MPC) and average propensity to consume (APC), and the determinants of saving, including marginal propensity to save (MPS) and average propensity to save (APS).

LO3.3: Analyze the investment function and the factors that influence investment demand.

LO3.4: Describe the concept of aggregate supply, its determinants, and the factors that can shift the aggregate supply curve.

CO4: Explain the functions and types of money, determinants of money supply and demand, and the determination of equilibrium rate of interest.

LO4.1: Define money and its various functions, and describe the different types of money, including fiat money, fiduciary money, metallic money, and paper money.

LO4.2: Discuss the demand for money and the quantity theory of money, including the motives for holding money: transaction, precautionary, and speculative

LO4.3: Analyze the determination of the equilibrium rate of interest using the Keynesian liquidity preference theory.

LO5.4: Identify and explain the various measures of money supply (M0, M1, M2, M3, M4).

CO5: Elaborate the role of money in the economy and the causes and effects of inflation.

LO5.1: Discuss the quantity theory of money and its implications for prices and inflation.

LO5.2: Analyze the causes and types of inflation, its social costs and benefits, and the relationship between nominal and real interest rates.

UNITS	CONTENTS	L	T	P	Total Hours
I (Marks-10)	Introduction Microeconomics vs Macroeconomics; Evolution of Macroeconomics as a separate discipline; Nature and scope of macroeconomics; Objectives of Macroeconomics – short term vs long run, economic growth vs stabilization	9	1		10
II (Marks-12)	National Income Accounting Measuring the value of economic activity and its importance; Meaning of GDP and GNP; Stocks and flows; Circular flow in an economy; Approaches to measuring GDP – Income method, Expenditure method, and value-added method; GDP deflator; Real GDP vs Nominal GDP; GDP and the underground economy; GDP and Social welfare.	12			12
III (Marks-14)	Aggregate Demand and Aggregate Supply Concept of aggregate demand; Components and determinants of aggregate demand – consumption, government spending, investment spending, and net exports; Consumption function – MPC and APC; Saving – determinants of saving – MPS and APS; Investment – determinants of investment; investment function; Concept of Aggregate supply; determinants of aggregate supply; factors shifting aggregate demand curve, the concept of multiplier.	13	1		14
IV (Marks-14)	Demand for and Supply of Money Definition and functions of money, Quantity Theory of Money- Cash transaction and Cash Balance Approaches. Demand for Money- Classical, Neo-classical and Keynesian Approaches. The Keynesian Liquidity Trap and its implications. Determination of Money supply.	12	2		14
V (Marks-10)	Inflation and Deflation Inflation- meaning, types, causes and effects; demand-pull and cost-push inflation; Inflationary gap. Deflation- meaning, effects, inflation vs deflation; Anti-inflationary measures- monetary policy and fiscal policy.	10			10
Total=60	Total	54	6		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

SUGGESTED READINGS:

- Dornbusch, R., Fischer, S. & Startz, R. (2018). *Macroeconomics* (12thed.). McGraw Hill Education
- Froyen, R.T. (2014). *Macroeconomic Theories and Policies* (10thed.). Pearson Education
- Mankiw, N.G. (2007). *Macroeconomics* (6th ed.). Worth Publishers
- Sikdar, S. (2006). *Principles of Macroeconomics*. Oxford University Press
- Bharali Ranjukumar, Dutta Sanjib, Samastigata Arthanitir Porichoy
- Bora Arindam, Samastigata Arthabigyan Porichai
- Ahmed Dr. Rofique, Rabha Dr. Rima, Adhunik Samastigata Arthabigyan

FYUGP (NEP) 2nd SEMESTER SYLLABUS

Course Title	:	Basics of Macroeconomics
Course Code	:	ECOGEN2
Nature of the Course	:	Generic Elective
Total Credits	:	03
Distribution of Marks	:	45 (End Sem) + 30(In-Sem)

Course Objectives:

1. To help students know the meaning of macroeconomics and how the overall production of economy is computed;
2. To familiarize the students with concepts of aggregate demand and aggregate supply;
3. To introduce the students with the classical and Keynesian theories of employment and output determination;
4. To help students understand the meanings of inflation and other concepts related to inflation.

Course Outcomes: after successful completion of this course, students will be able to-

CO1: Define national income and various accounting methods, and assess the limitations and significance of GDP as an indicator of economic health and social welfare.

LO1.1: Understand the importance of measuring economic activity and the various approaches to national income accounting.

LO1.2: Define and differentiate between GDP and GNP, and explain the concepts of stocks and flows.

LO1.3: Describe the circular flow of income in an economy and the methods of measuring GDP: income method, expenditure method, and value-added method.

LO1.4: Evaluate the limitations of GDP as a measure of economic activity, including its relationship with the underground economy and social welfare, and understand the significance of sustainable accounting.

CO2: Analyze the components and determinants of aggregate demand and aggregate supply, and understand how these factors interact to influence overall economic activity.

LO2.1: Define aggregate demand and its components, and identify the determinants of consumption, government spending, firm investment, and net exports.

LO2.2: Explain the consumption function, including marginal propensity to consume (MPC) and average propensity to consume (APC), and the determinants of saving, including marginal propensity to save (MPS) and average propensity to save (APS).

LO2.3: Analyze the investment function and the factors that influence investment demand.

LO2.4: Describe the concept of aggregate supply, its determinants, and the factors that can shift the aggregate supply curve.

CO3: Explain the functions and types of money, determinants of money supply and demand, and the determination of equilibrium rate of interest.

LO3.1: Define money and its various functions, and describe the different types of money, including fiat money, fiduciary money, metallic money, and paper money.

LO3.2: Discuss the demand for money and the quantity theory of money, including the motives for holding money: transaction, precautionary, and speculative

LO3.3: Analyze the determination of the equilibrium rate of interest using the Keynesian liquidity preference theory.

LO3.4: Analyze the causes and types of inflation, its social costs and benefits, and the relationship between nominal and real interest rates

CO5: Explain the functions and role of commercial bank and the central bank

LO5.1: Explain the function of commercial bank and the role of the central bank, and understand the different measures of money as defined by the RBI.

UNITS	CONTENTS	L	T	P	Total Hours
I (Marks-10)	Introduction to Macroeconomics and National Income Accounting The concept and nature of Macroeconomics, the major issues of Macroeconomics, concepts of National Income GDP/GNP, approaches to calculating GDP/GNP and Personal Income, Nominal and Real GDP	10			10
II (Marks-13)	Aggregate Demand and Aggregate Supply Concept of aggregate demand; Components and determinants of aggregate demand –consumption spending, government spending, investment spending and net exports; Consumption function – MPC and APC; Saving – determinants of saving – MPS and APS; Investment – determinants of investment; investment function; Concept of Aggregate supply; determinants of aggregate supply, factors shifting aggregate demand curve, the concept of Multiplier.	13			13
III (Marks-10)	Theory of Money Difficulties of Barter system; Definition of money, functions of money, types of money; Quantity theory of money- Fisher and Cambridge Equation. Inflation- meaning, types and causes.	10			10
IV (Marks-12)	Banking Definition, types and role of banks, Commercial banking- functions, Credit creation, Concept of non-performing assets, Central banking- functions and role, Credit control measures: Bank rate, Open Market Operations, Variable Cash Reserve Ratio and Selective credit control measures.	12			12
TOTAL =60		45	-	-	45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion

- Quiz

SUGGESTED READINGS:

- Dornbusch, R., Fischer, S. & Startz, R. (2018). *Macroeconomics* (12thed.). McGraw Hill Education
- Froyen, R.T. (2014). *Macroeconomic Theories and Policies* (10thed.). Pearson Education
- Mankiw, N.G. (2007). *Macroeconomics* (6th ed.). Worth Publishers
- Sikdar, S. (2006). *Principles of Macroeconomics*. Oxford University Press
- Bharali Ranjukumar, Dutta Sanjib, Samastigata Arthanitir Porichoy
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- Ahmed Dr. Rofique, Rabha Dr. Rima, Adhunik Samastigata Arthabigyan

FYUGP (NEP) 2nd SEMESTER SYLLABUS

Course Title: Data Collection and Presentation-II

Course Code: ECOSEC2

Nature of Course: Skill Enhancement Course

Total Credits: 3 credits

Distribution of Marks: 45 (End-Sem.) + 30 (In-Sem.)

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-10)	Data presentation Data Tabulation - organizing data into tables for clear presentation and analysis Data visualization - creating charts and graphs (histograms, bar charts, pie charts, scatter plot) to visually represent data trends and patterns Descriptive statistics - Calculating measures of central tendency (mean, median and mode) to summarize data Presentation of data - choosing appropriate presentation methods based on the types of data and the intended audience	10			10
II (Marks-5)	Practical application and case studies Real-world examples - applying data collection and presentation techniques to various fields (e.g. business, social science, health-care) Case studies - analyzing real-world scenario using data collection and presentation methods to solve problems	5			5
III (Marks-30)	Practical Field study and preparing project			30	30
TOTAL =45		15		30	45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 30 Marks

- Two Internal Examinations - **15 Marks**
- Attendance - **05 Marks**
- Others (Any tow) - **10 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

FYUGP (NEP) 3rd SEMESTER SYLLABUS

Course Title	:	Mathematical Methods for Economics I
Course Code	:	ECOMAJ3A
Nature of the Course	:	Major
Total Credits	:	04
Distribution of Marks	:	60 (End-Sem) + 40 (In-Sem)

Course Objectives:

1. To transmit the knowledge of basic mathematics that enables the study of economic theory
2. To illustrating the method of applying mathematical techniques to economic theory in general

Course Outcomes: On completion of this course, a student will be able to-

CO1: Explain the foundational concepts like sets and cartesian product

LO1.1: Describe different types of sets and perform set operations.

LO1.2: Explain and construct ordered pairs, Cartesian products, and relations.

CO2: Explain the foundational concepts like relations and functions, evaluate limits and continuity, and apply these concepts to solve numerical problems.

LO1.1: Explain functions, their properties and types, and graph different types of functions

LO1.2: Evaluate limits and continuity of functions

CO3: Apply rules of differentiation to analyze economic functions, including demand, cost, and revenue, and interpret their economic significance

LO3.1: Apply differentiation rules to functions with one independent variable.

LO3.2: Use derivatives in economic applications such as elasticity of demand and cost/revenue functions. LO3.3: Explain the relationship between average and marginal costs using derivatives.

LO3.4: Compute second and higher-order derivatives and apply them to economic problems

CO4: Use different techniques of integration to solve economic problems, including calculation of producer's and consumer's surplus.

LO4.1: Understand and apply basic rules of integration.

LO4.2: Use various techniques of integration including substitution, integration by parts, and partial fraction decomposition.

LO4.3: Derive total functions from marginal functions through integration.

LO4.4: Evaluate definite integrals and apply them to compute producer's and consumer's surplus.

CO5: Apply matrices and determinants in solving linear equations and performing static and dynamic input-output analysis.

LO5.1: Perform elementary matrix operations, including addition and multiplication.

LO5.2: Determine the rank of a matrix and calculate determinants.

LO5.3: Compute the inverse of a matrix.

LO5.4: Apply Cramer's rule to solve systems of linear equations.

LO5.5: Conduct static and dynamic input-output analysis using matrices

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-8)	Preliminaries Set: Set and Set operations; Ordered pairs, Cartesian products and relations, number system	7	1	-	8
II (Marks-8)	Function of one Real variable: Function and Different forms of functions; Polynomial, Rational, Exponential, Logarithmic, Explicit, Implicit, Power, Convex and Concave; Graph of function, Limit and Continuity of function.	7	1	-	8
III (Marks-15)	Derivatives of Functions of One Independent Variable: Rules of differentiation for a function with one independent variable; Second and higher order derivatives, Slope and Curvature; Economic application of derivatives; Elasticity of demand, Cost and Revenue functions; Relation between Average and Marginal Costs, Relation between Production and Revenue function.	13	2	-	15
IV (Marks-15)	Integration of functions Basic Rules of integration: Rules of Integration, Techniques of integration - substitution rule, integration by parts and partial fraction; Economic application of indefinite integration, Derivation of total functions from marginal functions; Definite integrals and its applications: Producer's surplus and consumer's surplus.	13	2	-	15
V (Marks-14)	Matrix, determinant and applications: Matrices-elementary operations: matrix addition, product, rank of a matrix, Determinants and their properties, inverse of a matrix, Application of Cramer's rule for solution of a system of linear equations; Input-output analysis: static and dynamic	12	2		14
TOTAL =60		52	8		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**

- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**

- Home assignment
- Class test/ Unit test
- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

SUGGESTED READINGS:

- A. C. Chiang & K. Wainwright (2005) Fundamental Methods of Mathematical Economics, Mcgraw Hill Education
- K. Sydsaeter, P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002
- Prof. S. Barua, (2000), Basic Mathematics and its Economic Applications, Macmillan
- D. Salvatore: Mathematics and Statistics, Schaum's Series Tata McGraw Hill 1. K. Sydsaeter P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi,2002
- Arindam Bora,(2019), Arthabigyant Ganitik Paddhati, Saraswati Prakashan

FYUGP (NEP) 3rd SEMESTER SYLLABUS

Course Title	:	Issues of Indian Economy
Course Code	:	ECOMAJ3B
Nature of Course	:	Major
Total Credits	:	4 credits
Distribution of Marks	:	60 (End-Sem.) + 40 (In-Sem.)

Course Objectives:

1. To understand the basic issues of Indian Economy and will be able to deal with various issues related to Indian Economy
2. To enlighten the recent changes to policies initiatives taken by Indian government.

Course Outcomes: On completion of this course, a student will be able to-

CO1: To examine the dynamics of India's labour force, occupational patterns, and unemployment trends, and analyze the role of government policies in addressing unemployment challenges.

LO 1.1: Describe the growth and structure of India's labour force and its relationship with economic development.

LO 1.2: Analyze the types and nature of unemployment prevalent in India.

LO 1.3: Evaluate the changing dimensions of unemployment and employment patterns over time.

LO 1.4: Assess the effectiveness of government policies and measures in addressing unemployment challenges and promoting inclusive growth

CO2: To explore the sectoral trends and issues of agricultural, industrial and service sector of the economy

LO 2.1: Analyze the problem of low productivity, green revolution and its impact and the trend to agricultural productivity

LO 2.2: Explain the industrial growth during pre-reform and post reform periods, role of Public sector: its performance and Issue of disinvestment, MSMEs growth and performance.

LO 2.3: Describe the growth of banking and Insurance Sector during the post reform period and the problem of unfavorable balance of payments and policy measures.

CO3: To evaluate the trajectory of India's economic development since independence and analyze the shifts in development strategies from import substitution to post-1991 globalization.

LO 3.1: Identify the key features of the Indian economy on the eve of independence.

LO 3.2: Compare and contrast the goals and components of alternative development strategies employed by India since independence.

LO 3.3: Analyze the impact of import substitution and protectionist policies on India's economic development.

LO 3.4: Evaluate the effectiveness and challenges of the post-1991 globalization strategies, including stabilization and structural adjustment packages.

CO4: To analyze India's economic interactions with the world economy and conduct a comparative assessment of India's development experience with high-performing Asian economies.

LO 4.1: Describe India's economic integration with the global economy and identify key drivers of international economic interactions.

LO 4.2: Compare and contrast India's development strategies with those of high-performing Asian economies such as Singapore, South Korea, and Taiwan.

LO 4.3: Analyze the factors contributing to the economic success of high-performing Asian economies and their relevance to India's development trajectory.

LO 4.4: Evaluate the lessons learned from international comparisons to inform India's future economic policies and strategies.

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-14)	<p>Basic Features of Indian Economy</p> <p>Characteristics of Indian economy, Estimation of National Income in India, Sectoral distribution of National Income and occupational structure, Major Issues of Development – Population, Poverty, Income Inequality, Unemployment (Concept and Policy related issues)</p>	11	1	-	14
II (Marks-16)	<p>Sectoral Trends and Issues:</p> <p>Agricultural sector: Problem of low productivity, Green Revolution and its impact, Land Reforms, Problems of Rural credits and marketing, emerging issues of Indian Agriculture, agricultural Export.</p> <p>Industry Sector: An overview of industrial growth during pre-reform and post reform periods, role of Public sector: its performance and Issue of disinvestment, MSMEs growth and performance.</p> <p>Service sector: Growth of banking and Insurance Sector during the post reform period.</p> <p>External Sector: Problem of unfavorable balance of payments and policy measures.</p>	18	2	-	16
III (Marks-16)	<p>Economic Reforms and Liberalization:</p> <p>Economic crises-background to economic reforms; policy response: the IMF resistance; policy reform measures: Structural reforms and macroeconomic stabilization measures; impact of economic reforms; the current government initiatives: Make in India, Skill India, Digital India, startup India, Pradhan Mantri Jan Dhan Yojana References:</p>	13	1	-	16
IV (Marks-14)	<p>International Comparisons:</p> <p>India's economic interaction with the Global economy, a comparative assessment of India's development experience with high-performing Asian economy – Singapore and China</p>	11	1	-	14
Total =60		55	05		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

SUGGESTED READINGS:

- Bardhan, P. (1999) “The Political Economy of Development of India”, OUP
- Sen, A. and Dreeze, J. (1999) “Economic Development and Social Opportunities”, OUP Rakshit, M. (2010), Macroeconomics of Post-Reform India, OUP
- Mukherjee, D. (2017). Indian economy since independence. New Central Book Agency Puri, V.K and Misra, S.K (2015). Indian Economy. Himalaya Publishing House
- Dutta, G. and A. Mahajan. *Indian Economy*, S. Chand, 72nd Edition
- Kapila, U. 2017. *Indian Economy: Performance and policies*, Academic Foundation, 18th edition
- Government of India (Various Issues) Economic Survey, Ministry of Finance, Government of India

FYUGP (NEP) 3rd SEMESTER SYLLABUS

Course Title	:	Basics of Indian Economy
Course Code	:	ECOMIN3
Nature of the Course	:	Minor
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To review major trends in economic indicators in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points
2. To know the performance and problems of the primary, secondary and tertiary sectors of Indian economy

Course Outcomes: On completion of this course, a student will be able to-

CO1: Understand and evaluate the evolution of development strategies in India since independence, focusing on self-reliance, import substitution, protectionism, and post-1991 globalization reforms.

LO1.1: Describe the key features and goals of India's development strategy immediately after independence.

LO1.2: Analyze the impact of import substitution and protectionist policies on India's economic development. LO1.3: Explain the shift towards globalization post-1991 and the structural adjustment packages implemented.

LO1.4: Critically evaluate the outcomes of the different development strategies on India's economic growth and development.

CO2: Assess the demographic characteristics and trends in India, including population growth, composition, and policy implications.

LO2.1: Explain the size and growth rates of India's population and their implications.

LO2.2: Analyze the trends in birth and death rates in India and their demographic impact.

LO2.3: Discuss the concept of demographic dividend and its potential in India.

LO2.4: Evaluate the National Population Policy and its effectiveness in addressing demographic challenges. promoting inclusive growth

CO3: To explore the sectoral trends and issues of agricultural sector of the economy

LO 3.1: Analyze the problem of low productivity

LO 3.2: Explain the concept of Green revolution and its impact and the trend to agricultural productivity

LO 3.3: Critically discuss the problem of land reform, rural credit facilities and the trend to agricultural productivity in the economy

CO4: To analyze the development of industrial and service sector of the economy

LO 4.1: Explain the overview of industrial growth during pre-reform and post reform periods

LO 4.2: Explain the role of public sector: its performance and Issue of disinvestment

LO 4.3: Critically discuss the MSMEs growth and performance, Role of the Service sector: growth of banking and Insurance sector during the post reform period

CO5: Evaluate human development indicators and India's performance in human development at both national and global levels.

LO5.1: Define key human development indicators and their importance.

LO5.2: Compare human development across different states in India.

LO5.3: Assess India's human development record in a global context.

LO5.4: Analyze the factors contributing to variations in human development across different regions and states in India.

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-12)	Development Strategies since Independence: India as a Developing Economy, Determinants of Economic Development, Indian Economy on the eve of independence - An overview; Development policies (1947 to 1990), the post - 1991 globalization strategies based on stabilization and Structural adjustment packages.	11	1	-	12
II (Marks-12)	Demographic Features and Trends: Size and growth rates of population, trends in birth and death rates, Density of population, Age and Sex Composition, Demographic Dividend; National Population Policy.	11	1	-	12
III (Marks-11)	Agriculture and its Development: Agricultural sector: Problem of low productivity, Green Revolution and its impact, Land Reforms, Problems of Rural Credits and marketing, emerging issues of Indian Agriculture, agricultural Export.	10	1	-	11
IV (Marks-13)	Development of the Industrial and Service Sectors: An overview of industrial growth during pre-reform and post reform periods, role of Public sector: its performance and Issue of disinvestment, MSMEs growth and performance. Role of the Service sector: growth of banking and Insurance sector during the post reform period	11	2	-	13
V (Marks-12)	Human development: Human Development in India- Human Development indicators, Human Development across states; India's human Development record in global perspective.	11	1		12
Total =60		54	6		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**

- Home assignment
- Class test/ Unit test
- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

SUGGESTED READINGS:

- Bardhan, P. (1999) “The Political Economy of Development of India”, OUP
- Sen, A. and Dreeze, J. (1999) “Economic Development and Social Opportunities”, OUP Rakshit, M. (2010), Macroeconomics of Post-Reform India, OUP
- Mukherjee, D. (2017). Indian economy since independence. New Central Book Agency Puri, V.K and Misra, S.K (2015). Indian Economy. Himalaya Publishing House
- Dutta, G. and A. Mahajan. *Indian Economy*, S. Chand, 72nd Edition
- Kapila, U. 2017. *Indian Economy: Performance and policies*, Academic Foundation, 18th edition
- Government of India (Various Issues) Economic Survey, Ministry of Finance, Government of India

FYUGP (NEP) 3rd SEMESTER SYLLABUS

Course Title	:	Economy of India and Assam
Course Code	:	ECOGEN3
Nature of Course	:	Generic Elective
Total Credits	:	03
Distribution of Marks	:	45 (End-Sem.) + 30 (In-Sem.)

Course Objectives:

1. To understand the basic issues of Indian Economy and will be able to deal with various issues related to Indian Economy
2. To analyze the various concepts of Assam economy with reference to trends, patterns and issues

Course Outcomes: On completion of this course, a student will be able to-

CO1: Understand the basic features of the Indian economy

LO1.1: Describe the determinants of Economic Development, Major issues of development

LO1.2: Analyze the Characteristics of Indian economy, Estimation of National Income in India, Sectoral distribution of National Income and occupational structure

CO2: To explore the sectoral trends and issues of agricultural sector of the economy

LO 2.1: Analyze the problem of low productivity

LO 2.2: Explain the concept of Green revolution and its impact and the trend to agricultural productivity

LO 2.3: Critically discuss the problem of land reform, rural credit facilities and the trend to agricultural productivity in the economy

CO3: To analysis the development of industrial and service sector of the economy

LO 3.1: Explain the overview of industrial growth during pre-reform and post reform periods

LO 3.2: Explain the role of public sector: its performance and Issue of disinvestment

LO 3.3: Critically discuss the MSMEs growth and performance, Role of the Service sector: growth of banking and Insurance sector during the post reform period

CO4: To analysis the development and issues of Assam economy

LO 4.1: Understand resources of the State- Mineral, Forest, and Water resources, Human Resources

LO 4.2: Explain the Trends and Pattern of Primary, Secondary and Tertiary sectors, Performance and standing of Assam's economy in the national context

LO 4.3: Critically discuss the Economic problems of Assam – Unemployment, Poverty, Immigration and its impacts, Flood and erosion problem, Border area development

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-10)	Basic Features of Indian Economy: India as a Developing Economy, Determinants of Economic Development, Major issues of development. Characteristics of Indian economy, Estimation of National Income in India, Sectoral distribution of National Income and occupational structure	10			10
II (Marks-10)	Agriculture and its Development: Agricultural sector: Problem of low productivity, Green Revolution and its impact, Land Reforms, Problems of Rural Credits and marketing, emerging issues of Indian Agriculture, agricultural Export.	10			10
III (Marks-10)	Development of the Industrial and Service Sectors: An overview of industrial growth during pre-reform and post reform periods, role of Public sector: its performance and Issue of disinvestment, MSMEs growth and performance. Rule of the Service sector: growth of banking and Insurance sector during the post reform period	10			10
IV (Marks-15)	Issues of Assam Economy: Resources of the State- Mineral, Forest, and Water resources, Human Resources. Trends and Pattern of Primary, Secondary and Tertiary sectors. Performance and standing of Assam's economy in the national context. Economic problems of Assam – Unemployment, Poverty, Immigration and its impacts, Flood and erosion problem, Border area development.	15			15
TOTAL =45		45			45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 30 Marks

- Two Internal Examinations - **15 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **10 Marks**
 - Home assignment
 - Class test/ Unit test

- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

SUGGESTED READINGS:

- Bardhan, P. (1999) “The Political Economy of Development of India”, OUP
- Sen, A. and Dreeze, J. (1999) “Economic Development and Social Opportunities”, OUP Rakshit, M. (2010), Macroeconomics of Post-Reform India, OUP
- Mukherjee, D. (2017). Indian economy since independence. New Central Book Agency Puri, V.K and Misra, S.K (2015). Indian Economy. Himalaya Publishing House
- Dutta, G. and A. Mahajan. *Indian Economy*, S. Chand, 72nd Edition
- Kapila, U. 2017. *Indian Economy: Performance and policies*, Academic Foundation, 18th edition
- Government of India (Various Issues) Economic Survey, Ministry of Finance, Government of India

FYUGP (NEP) 3rd SEMESTER SYLLABUS

Course Title: Data Analysis and Interpretation

Course Code: ECOSEC3

Nature of Course: Skill Enhancement Course

Total Credits: 3 credits

Distribution of Marks: 45 (End-Sem.) + 30 (In-Sem.)

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-10)	Introduction Meaning of data, its types and different scales of measurement (nominal, ordinal, interval, ratio), methods of collecting data Organization of data: meaning and types of variables, frequency distribution Presentation of data: Tabular and Diagrammatic presentation of data (histograms, bar charts, pie charts, polygon, ogive)	10			10
II (Marks-5)	Practical application and case studies Real-world examples- applying data collection and presentation techniques to various fields (e.g. business, social science, health-care) Case studies- analyzing real-world scenario using data collection and presentation methods to solve problems	5			5
III (Marks-30)	Practical Field study and preparation of project report. The project report may consist of- <ul style="list-style-type: none"> • Title of the project • Introduction • Objective of the study • Method or procedure followed • Analysis and Interpretation of data • Findings of the study • Conclusion 			30	30
TOTAL		15		30	45

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 30 Marks

Two Internal Examinations - **15 Marks**

Attendance - **05 Marks**

Others (Any three) - **10 Marks**

- Home assignment
- Class test/ Unit test
- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

FYUGP (NEP) 4th SEMESTER SYLLABUS

Course Title	:	Advanced Microeconomics
Course Code	:	ECOMAJ4A
Nature of the Course	:	Major
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To introduce the students with the concept of oligopoly market structure and its application in real life situation
2. To familiarize the students with concepts of general equilibrium and social welfare economics
3. To help students know the input market and how demand for and supply of labour is computed
4. To help students understand the meanings of game theory and competitive strategies in economics

Course Outcomes: after successful completion of this course, a student will be able to-

CO 1: Learn about the potential outcomes of oligopoly market

LO 1.1: Describe the meaning, features and short run pricing and output decisions in oligopoly market

LO 1.2: Explain the Cournot Model, Bertrand model, Kinked demand model, Collusive oligopoly model, Cartels, Price Leadership model

CO2: Understanding how markets interact and determine overall economic outcomes, as well as analyzing the conditions for efficient resource allocation and the implication for social welfare. Students would be able to apply these concepts to analysis real-world economic problems and evaluate the effectiveness of government policies

LO 2.1: Explain the general equilibrium analysis, equilibrium and efficiency under pure exchange and production and equity and efficiency

LO 2.2: Explain the basic issues of welfare economics, pigovian welfare economics, pareto optimality, compensation principle and the social welfare function

CO3: To analysis the input market with the knowledge and skill to understand how firms acquire the resources need to produce goods and services

LO 3.1: Define the basic concepts of labour, land and capital markets

LO 3.2: Explain the derived demand, productivity of an input, marginal productivity theory, demand for labour, input demand curves, labour market and public policy

CO4: To analysis the different real-life situation and learn to predict the optimal strategies of players and how the players can exploit strategic situation for the benefit of their own

LO 4.1: Discuss the concepts, importance and application of game theory and types of games

LO 4.2: Explain the pure and maximum strategies, dominant strategies and mixed strategies

LO 4.3: Critically discuss the concept of nash equilibrium, prisoner's dilemma, repeated games, sequential games threats, commitments and credibility and entry deterrance

Units		L	T	P	Total Hours
I (Marks-15)	Oligopoly Features, Short-run pricing and output decisions, Cournot model, Bertrand model, Kinked demand model, Collusive oligopoly model, Cartels, Price Leadership model	12	3	-	15

II (Marks-15)	General Equilibrium, Efficiency and Welfare Economics General equilibrium analysis, equilibrium and efficiency under pure exchange and production, equity and efficiency. Basic issues of welfare Economics, Pigouvian welfare Economics, Pareto Optimality, Compensation principle, the social welfare Function	12	3	-	15
III (Marks-15)	Input Market Labour, Land and capital market- Basic concepts; Derived Demand: Productivity of an input, Marginal Productivity theory, demand for labour, input demand curves, shifts in input demand curves, competitive labour market, labour market and public policy	12	3	-	15
IV (Marks-15)	Game theory and Competitive Strategies Concepts, importance and application of game theory, types of game, pure and, maximin strategies, dominant strategies, mixed strategies Concept of Nash Equilibrium, Prisoner's dilemma, Repeated games, sequential games, threats, commitments and credibility, Entry deterrence.	12	3	-	15
Total =60					

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar
 - Group discussion
 - Quiz

SUGGESTED READINGS:

- H. R. Varian (2010); Intermediate Microeconomics; A Modern Approach, 8th Edition, W.W. Norton and Company/Affiliated East-West Press (India)
- R. S. Pindyck, D.N. Rubinfeld and P. L. Mehta (2009); Microeconomics, 7th Edition, Pearson, New Delhi
- C. Snyder and W. Nicholson (2012); Microeconomics Theory: Basic principles and extensions, 11th edition, Cengage Learning Delhi, India
- G. S. Maddala and Ellen Miller, Microeconomics; Theory and Application, Mc. Graw Hill Education, Tenth Reprint, 2013, New Delhi Edition
- Ushamanar Byastigata Arthbigyan, Minoti Gogoi Baruah, Dr. Bidisha Mahanta Hazarika, Dr. Brogen Ch. Neog and Arindam Bora

FYUGP (NEP) 4th SEMESTER SYLLABUS

Course Title	:	Development Economics
Course Code	:	ECOMAJ4B
Nature of the Course	:	Majo
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To impart the ideas of growth and development among the learners;
2. To acquaint the students about different growth strategies and models;
3. To familiarize the students with the concepts and implications of poverty and inequality; and
4. To provide the students with the knowledge of various institutional structures under which various development policies have to be adopted.

Course Outcomes: After successful completion of this course students will be able to-

CO1: Understand the fundamental concepts and distinctions between economic growth and development, and evaluate the factors influencing economic development.

LO 1.1: Define economic development and underdevelopment, and distinguish between economic growth and development.

LO 1.2: Identify and explain the various indicators and measurements used to assess economic development.

LO 1.3: Analyze the factors that affect economic growth, including the roles of agriculture, industry, and infrastructure.

LO 1.4: Evaluate the historical evolution of development economics and its impact on contemporary economic policies.

CO2: Analyze various development strategies and their implications for achieving sustainable economic growth.

LO 2.1: Explain the stages of economic growth as proposed by Rostow and their relevance to modern economies.

LO 2.2: Discuss the low-level equilibrium trap and the critical minimum effort hypothesis.

LO 2.3: Compare and contrast the big push theory with the concepts of balanced and unbalanced growth.

LO 2.4: Assess the implications of choosing different techniques and strategies for economic development.

CO3: Understand and apply various economic growth models to analyze long-term economic performance.

LO 3.1: Describe the classical growth model and its foundational principles.

LO 3.2: Analyze the Harrod-Domar model and its application to economic planning.

LO 3.3: Evaluate the contributions of Kaldor, Solow, Meade, and endogenous growth models (such as Romer's version) to growth theory.

LO 3.4: Apply growth models to understand real-world economic growth scenarios and predict future trends.

CO4: Understand the concepts and measurement of poverty and inequality, and explore their relationship with economic development

LO 4.1: Define and differentiate various measures of poverty, including head count ratio, Sen's Index, HPI, and MPI.

LO 4.2: Explain and calculate inequality measures such as the Gini coefficient and Lorenz curve.

LO 4.3: Analyze the relationship between inequality and economic development, identifying key mechanisms that generate poverty traps.

LO 4.4: Discuss the concept of path dependence in growth processes and its implications for policy making.

CO5: Evaluate the role of political institutions and governance in shaping economic development and performance.

LO 5.1: Identify the determinants of democracy and their impact on economic performance.

LO 5.2: Compare alternative institutional trajectories and their relationship with economic outcomes.

LO 5.3: Analyze the relationship between democracy and economic development within different country contexts.

LO 5.4: Assess the effects of state ownership, regulation, government failures, and corruption on economic development

Units		L	T	P	Total Hours
1 (Marks -12)	Conceptions of growth and development: Evolution of Development Economics; Meaning of economic development and underdevelopment; distinction between economic growth and development; measurement and indicators of economic development; factors affecting growth; importance of agriculture; industry and infrastructure in economic development	9	3	-	12
2 (Marks -12)	Strategies of Development: Stages of Economic growth- Rostow; Low level equilibrium trap, the critical minimum effort hypothesis; Big push theory, Balanced vs. Unbalanced growth; Choice of Technique	9	3	-	12
3 (Marks -12)	Growth Models: Classical growth model; Harrod-Domar model; Kaldor's Model, Solow model and its variants, Meade Model, Endogenous growth model- Romer's Version.	9	3	-	12
4 (Marks -12)	Poverty and Inequality: Concept and Measures of poverty- Head count ratio, Sen's Index, HPI, MPI. Inequality measures- Gini Coefficient and Lorenz Curve; Connections between inequality and development; Mechanisms that generate poverty traps and path dependence of growth processes	9	3	-	12
5 (Marks -12)	Political Institutions and the Functioning of the State Determinants of democracy; Alternative institutional trajectories and their relationship with economic performance; Relationship between democracy and economic development; Within-country differences in the functioning of state institutions; State ownership and regulation; Government failures and Corruption.	9	3	-	12
Total =60		45	15	-	60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**

- Home assignment
- Class test/ Unit test
- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

SUGGESTED READINGS:

- Debraj Ray, Development Economics, Oxford University Press, 2009
- Partha Dasgupta, Economics, A Very Short Introduction, Oxford University Press, 2007.
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press, 2006.
- Thomas Schelling, Micro motives and Macro behavior, W. W. Norton, 1978.
- Albert O. Hirschman, Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States, Harvard University Press, 1970.
- Raghuram Rajan, Fault Lines: How Hidden Fractures Still Threaten the World Economy, 2010.
- Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge University Press, 1990.
- Dani Rodrik, The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist, Oxford University Press, 2011.
- Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), Globalization in Historical Perspective, University of Chicago Press, 2003.
- Yujiro Hayami and Yoshihisa Godo : Development Economics, Oxford Publication, 2009 A. P. Thirlwall : Economics of Development, Palgrave Macmillan
- Unnayan Arthasastra, Dr. Rofique Ahmed
- Unnayan Arthaniti – 1, Minoti Gogoi Baruah, Dr. Bidisha Mahanta Hazarika, Dr. Brogen Ch. Neog and Arindam Bora

FYUGP (NEP) 4th SEMESTER SYLLABUS

Course Title	:	Mathematical Methods for Economics II
Course Code	:	ECOMAJ4C
Nature of Course	:	Major
Total Credits	:	04
Distribution of Marks	:	60 (End-Sem.) + 40 (In-Sem.)

Course Objectives:

1. To enable the learners to extend their knowledge of derivatives to functions of several variables as well as their applications
2. To foster a solid understanding of various optimization techniques and their application in relevant economic fields
3. To provide basic knowledge of differential and difference equation and their economic application

Course Outcomes: On completion of this course, a student will be able to-

CO1: Use partial and total differentiation to analyze and solve problems in economics, including production and consumer theory.

LO1.1: Perform partial and total differentiation of functions involving several variables.

LO1.2: Apply differentiation techniques to analyze indifference curves and derive expansion paths.

LO1.3: Evaluate production functions, including homogeneous functions, using Euler's Theorem.

LO1.4: Analyze and compare the properties of Cobb-Douglas and CES production functions.

CO2: Apply methods of unconstrained optimization to solve economic problems involving single and multiple variables.

LO2.1: Perform unconstrained optimization for functions of one variable and interpret economic applications.

LO2.2: Solve unconstrained optimization problems involving multiple variables.

LO2.3: Analyze economic scenarios such as discriminating monopoly and multiproduct monopoly using optimization techniques.

LO2.4: Interpret the results of optimization in the context of economic decision-making.

CO3: Use Lagrange multipliers to solve constrained optimization problems and apply these methods to consumer and producer equilibrium.

LO3.1: Explain the concept of constrained optimization and the role of Lagrange multipliers.

LO3.2: Apply Lagrange multipliers to solve optimization problems with equality constraints.

LO3.3: Analyze consumer equilibrium using constrained optimization techniques.

LO3.4: Apply constrained optimization to determine producer equilibrium and interpret the results.

CO4: Understand and solve first order linear differential equations and exact differential equations, with applications to economic problems.

LO4.1: Identify and solve first order linear differential equations using standard methods and interpret their solutions in the context of economic problems.

LO4.2: Determine and solve exact differential equations and apply these solutions to relevant economic scenarios.

CO5: Understand and apply first-order difference equations to model and analyze economic phenomena.

LO5.1: Define and solve first-order difference equations.

LO5.2: Interpret the solutions of difference equations in economic contexts.

LO5.3: Apply difference equations to model economic dynamics, such as inventory control and market equilibrium.

LO5.4: Analyze the stability of economic models using difference equations.

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-16)	Derivatives of Functions of several variables: Partial and Total differentiation and Economic applications, Comparative Static Analysis of Market Model and National Income Model; Indifference curve analysis; Expansion Path, Production Function Analysis- Homogeneous Functions and Euler's Theorem; Cobb Douglas Production Function and its Properties.	14	2		16
II (Marks-16)	Unconstrained optimization: Unconstrained optimization with one variable and Economic Applications; Unconstrained optimization with more than one variable and Economic Applications- Discriminating Monopoly, multiproduct monopoly.	14	2		16
III (Marks-12)	Constrained optimization with equality constraints: Constrained Extreme, Lagrange Multiplier method, Economic application of Constrained Optimization - consumer's equilibrium and producer's equilibrium.	10	2		12
IV (Marks-8)	Differential Equation: First order linear differential equations; exact differential equation, Economic applications.	7	1		8
V (Marks-8)	Difference equation: First order Difference equation and its Economic Applications	7	1		8
TOTAL =60		52	8		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test

- Field work
- Viva voce
- Seminar
- Group discussion
- Quiz

SUGGESTED READINGS:

- A. C. Chiang & K. Wainwright (2005) Fundamental Methods of Mathematical Economics, Mcgraw Hill Education
- K. Sydsaeter P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi,2002
- Prof. S. Barua, (2000), Basic Mathematics and its Economic Applications, Macmillan
- D. Salvatore: Mathematics and Statistics, Schaum's Series Tata McGraw Hill
- Arindam Bora,(2020), Arthabigyant Ganitik Pranali, Saraswati Prakashan

FYUGP (NEP) 4th SEMESTER SYLLABUS

Course Title	:	Public Finance
Course Code	:	ECOMAJ4D
Nature of the Course	:	Major
Total Credits	:	04
Distribution of Marks	:	60 (End Sem) + 40 (In-Sem)

Course Objectives:

1. To acquaint the learners about the basics of public finance
2. To impart concepts to the students about public revenue, public expenditure, public debt and government budgeting

Course Outcomes: after completion of this course the learner will be able to learn-

CO 1: Evaluate the subject matter of Public Finance.

LO1.1: Explore the role of public finance in market economies and the characteristics of public goods versus private goods.

LO 1.2: Analyze the Free Rider problem and its implications for public goods provision.

CO 2: Analyse the characteristics of a good tax system, assess the distribution of the burden of taxation and analyze the effects of taxation.

LO 2.1: Identify and classify various sources of tax and non-tax revenue.

LO 2.2: Apply principles of taxation to real-world scenarios and understand the effects and incidence of taxation.

LO 2.3: Analyze India's tax system and evaluate its main features.

CO 3: Assess the role of public expenditure and public debt and examine the reasons for their growth.

LO 3.1: Explain the theories and effects of public expenditure and its role in economic growth.

LO 3.2: Discuss the significance of public expenditure in India.

LO 3.2: Discuss the mechanisms, sources, and effects of public debt and analyze the growth of public debt in India.

CO 4: Examine the role of government budget.

LO 4.1: Analyze budgetary policies in India, including components of revenue and capital budgets, and trends in central government receipts and expenditure.

LO 4.2: Evaluate the latest Union Budget of India.

CO 5: Evaluate the role of fiscal policy in developed and less developed countries.

LO 5.1: Discuss fiscal federalism, including the principles for efficient division of financial resources and methods of resource transfer.

LO 5.2: Explain the Centre-State financial relations in India.

Units		L	T	P	Total hours
1 (Marks-10)	Nature and Scope of Public Finance: Origin and development of public finance, meaning and subject matter, public finance versus private finance, role of public finance, need for public sector in market economies, public goods – characteristics, type of public goods, public versus private goods, the Free Rider problem.	10			10
2 (Marks-14)	Public Revenue: Tax and non-tax revenue, sources of tax and non-tax revenue, characteristics of a good tax systems, Principles of Taxation- the Benefit Principle and Ability to Pay principle, Impact shifting and incidence of taxes – meaning and importance. The Modern theory of Incidence and Shifting.	14			14

- Dr. Atul Goswami, Dr. Chandan Goswami: Sarkari Bitto Bigyan Tatto aur Prayug
- Dr. Nanigopal Goswami: Sarkari Bitto

FYUGP (NEP) 4th SEMESTER SYLLABUS

Course Title	:	Fundamental Mathematics for Economics
Course Code	:	ECOMIN4
Nature of Course	:	Minor
Credits	:	04
Distribution of Marks	:	60 (End-Sem.) + 40 (In-Sem.)

Course Objectives:

1. To transmit the knowledge of basic mathematics that enables the study of economic theory.
2. To illustrating the method of applying mathematical techniques to economic theory in general

Course Outcomes: On completion of this course, a student will be able to-

CO1: Explain the foundational concepts like sets and cartesian product

LO1.1: Describe different types of sets and perform set operations.

LO1.2: Explain and construct ordered pairs, Cartesian products, and relations.

CO2: Explain the foundational concepts like relations and functions, evaluate limits and continuity, and apply these concepts to solve numerical problems.

LO1.1: Explain functions, their properties and types, and graph different types of functions

LO1.2: Evaluate limits and continuity of functions

CO3: Apply rules of differentiation to analyze economic functions, including demand, cost, and revenue, and interpret their economic significance

LO3.1: Apply differentiation rules to functions with one independent variable.

LO3.2: Use derivatives in economic applications such as elasticity of demand and cost/revenue functions.

LO3.3: Explain the relationship between average and marginal costs using derivatives.

LO3.4: Compute second and higher-order derivatives and apply them to economic problems

CO4: Use different techniques of integration to solve economic problems, including calculation of producer's and consumer's surplus.

LO4.1: Understand and apply basic rules of integration.

LO4.2: Use various techniques of integration including substitution, integration by parts, and partial fraction decomposition.

LO4.3: Derive total functions from marginal functions through integration.

LO4.4: Evaluate definite integrals and apply them to compute producer's and consumer's surplus.

CO5: Apply matrices and determinants in solving linear equations and performing static and dynamic input-output analysis.

LO5.1: Perform elementary matrix operations, including addition and multiplication.

LO5.2: Determine the rank of a matrix and calculate determinants.

LO5.3: Compute the inverse of a matrix.

LO5.4: Apply Cramer's rule to solve systems of linear equations.

LO5.5: Conduct static and dynamic input-output analysis using matrices

UNITS	COURSE CONTENTS	L	T	P	Total Hours
I (Marks-8)	Preliminaries: Set and set operations; Ordered pairs, Cartesian products and relations, Number system.	8		-	8

II (Marks-10)	Function of one Real variable: Function and Different forms of function; Polynomial, Power, Exponential, Logarithmic, Convex and Concave; Limit and Continuity of function.	9	1	-	10
III (Marks-15)	Derivatives of Functions of One Independent Variable: Rules of differentiation for a function with one independent variable; Second and higher order derivatives, Economic application of derivatives; Elasticity of demand, Cost and Revenue functions; Relation between Average and Marginal Costs,	13	2	-	15
IV (Marks-12)	Integration of functions: Basic Rules of integration; Techniques of integration substitution rule, integration by parts and partial fraction; Derivation of total functions from marginal functions; Definite integrals and its applications: Producer's surplus and consumer's surplus.	10	2	-	12
V (Marks-15)	Matrix, Determinant and Applications: Matrices-elementary operations: matrix addition, product, rank of a matrix, Determinants and their properties, inverse of a matrix, Cramer's rule and application in Economics	13	2		15
Total =60	Total	53	07		60

L: Lectures

T: Tutorials

P: Practical

MODES OF IN-SEMESTER ASSESSMENT: 40 Marks

- Two Internal Examinations - **20 Marks**
- Attendance - **05 Marks**
- Others (Any three) - **15 Marks**
 - Home assignment
 - Class test/ Unit test
 - Field work
 - Viva voce
 - Seminar

- Group discussion
- Quiz

SUGGESTED READINGS:

- A. C. Chiang & K. Wainwright (2005) Fundamental Methods of Mathematical Economics, Mcgraw Hill Education
- K. Sydsaeter, P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002
- Prof. S. Barua, (2000), Basic Mathematics and its Economic Applications, Macmillan
- D. Salvatore: Mathematics and Statistics, Schaum's Series Tata McGraw Hill 1. K. Sydsaeter P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi,2002
- Arindam Bora,(2019), Arthabigyant Ganitik Paddhati, Saraswati Prakashan