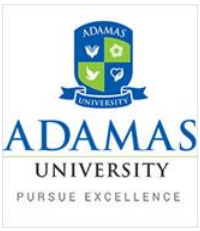
ADAMAS UNIVERSITY

SCHOOL OF LIBARAL ARTS AND CULTURAL STUDIES

DEPARTMENT OF ECONOMICS

B.SC. (HONS) ECONOMICS PROGRAMME

(2023-27)



ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF LIBARAL ARTS AND CULTURAL STUDIES
DEPARTMENT OF ECONOMICS

VISION OF THE UNIVERSITY

To be an internationally recognized university through excellence in inter-disciplinary education, research and innovation, preparing socially responsible well-grounded individuals contributing to nation building.

MISSION STATEMENTS OF THE UNIVERSITY

M.S 01: Improve employability through futuristic curriculum and progressive pedagogy with cutting-edge technology

M.S 02: Foster outcomes based education system for continuous improvement in education, research and all allied activities

M.S 03: Instill the notion of lifelong learning through culture of research and innovation

M.S 04: Collaborate with industries, research centers and professional bodies to stay relevant and up-to-date

M.S 05: Inculcate ethical principles and develop understanding of environmental and social realities

CHANCELLOR / VICE CHANCELLOR

VISION OF THE SCHOOL

To be a new age school maintaining international standards of industry-relevant interdisciplinary education and research in the field of business, commerce and economics and development of professionals adapt at leveraging technology & conscious of society & employment.

MISSION STATEMENTS OF THE SCHOOL

M.S 01: Focused on outcome based learning curriculum for the students embarking on a journey of intellectual, personal and professional growth.

M.S 02: Integrate theoretical knowledge to build wider & sustainable applications embracing diversity

M.S 03: Incorporating trans-disciplinary learning approach through research in various allied disciplines, including emerging areas.

M.S 04: Aim for all round development of students using modern pedagogical tools & techniques to create industry ready graduates, reflective lifelong learners & conscious global citizens.

M.S 05: Encourage students to inculcate entrepreneurial spirits and traits & excel at creation of national economic value.

DEAN / SCHOOL CONCERNED

VISION OF THE DEPARTMENT

To emerge as world class Centre of advanced learning in Economics through promulgating interdisciplinary and research driven courses. While dissemination of knowledge of the subject to address real life issues in business and other spheres of life is of focus, building socially responsible citizens through various community service and capacity building courses is interwoven throughout the learning.

MISSION STATEMENTS OF THE DEPARTMENT

M.S 01: Improve employability of our students through futuristic curriculum and progressive pedagogy through regular interaction with 'people at practice' from industry, NGOs, think tanks.

M.S 02: Adopt Outcome Based Education (OBE) in developing the curricula and syllabi to ensure the goal oriented training and measuring its attainment

M.S 03: Prepare the mind to think in an innovative way and to look at any practical problem in real life so that the learners develop a research orientation

M.S 04: Amalgamation of 'theory with practice' through collaboration with industry, think tanks, policy research centres, etc. in terms of course design, delivery, and project training.

M.S 05: Instill morale, social ethics, and professional behavior to get back to society as a 'socially responsible citizen' is the motto to help a greater agenda of 'nation building'.

HOD **DEAN / SCHOOL CONCERNED**

NAME OF THE PROGRAMME:

B.SC (HONS) IN ECONOMICS

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

PEO 01: Graduates will have understanding of the economic process that governs the production, distribution and consumption of goods and services in various micro as well as macro levels.

PEO 02: Graduates will have adequate knowledge and technical skills to make them globally competent to excel in career.

PEO 03: Graduates will be prepared to think in an innovative way to explain any practical problem in the field of economics and in any other allied area, so that the learners get prepared for cutting edge research.

PEO 04: Groom the students to be 'employable' through developing soft-skills, self-learning abilities, exposure to technology, industry training.

PEO 05: Students will develop a research orientation and get an idea of frontiers of the discipline.

HOD **DEAN / SCHOOL CONCERNED**

NAME OF THE PROGRAMME:
B.SC (HONS) IN ECONOMICS

GRADUATE ATTRIBUTE / PROGRAMME OUTCOMES (PO)

GA 01 / PO 01: Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society

GA 02 / PO 02: Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions

GA 03 / PO 03: Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data

GA 04 / PO 04: Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society

GA 05 / PO 05: Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns

GA 06 / PO 06: Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society

GA 07 / PO 07: Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.

GA 08 / PO 08: Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship

HOD **DEAN / SCHOOL CONCERNED**

NAME OF THE PROGRAMME:

B.SC. (H) ECONOMICS

PROGRAMME SPECIFIC OUTCOMES (PSO)

At the end of the Programme the students will be able to:

PSO 01: Understand and comprehend theories in microeconomics and macroeconomics at an intermediate level

PSO 02: Acquaint with statistical, mathematical and econometric methods and apply them to economic analysis of data

PSO 03: Appreciate the evolution and historical developments in light of major schools of thoughts in economics

PSO 04: Apprehend the variety of economic issues pertaining to Indian economy in particular and global economy in general

PSO 05: Demonstrate the knowledge of money, financial markets and public finance and classify the role of fiscal and monetary policies in balancing the economy

PSO 06: Outline the issues in development economics with aid of theories and model and discuss about the issues of poverty and inequalities

PSO 07: Identify the core ingredients of international economics and explore the policy issues in an open economy setting

HOD **DEAN / SCHOOL CONCERNED**

SCHOOL OF LIBARAL ARTS AND CULTURAL STUDIES

DEPARTMENT OF ECONOMICS

FOUR-YEAR B.SC. (HONS) DEGREE PROGRAMME
COURSE STRUCTURE AND SYLLABUS
(2023-2027)

SCHOOL OF LIBARAL ARTS AND CULTURAL STUDIES								
UNDERGRADUATE COURSE STRUCTURE								
B.SC (H) ECONOMICS								
BATCH 2023-27								
SEMESTER I								
S.No	**Type of Course**	**Code**	**Title of the Course**	**Contact Hours Per Week**				**Remarks**
				L	**T**	**P**	**C**	
1	CC	ECO101	Introduction to Microeconomics	3	1	0	4	CC-1
2	CC	ECO102	Mathematics for Economics	3	1	0	4	CC-2
3	MDC						3	
4	AEC						3	
5	Minor	100-199					4	
6	VAC						2	
Semester Credits							**20**	
SEMESTER II								
7	CC	ECO103	Intermediate Microeconomics - I	3	1	0	4	CC-3
8	CC	ECO104	Introduction to Macroeconomics	3	1	0	4	CC-4
9	MDC			3			3	
10	SEC						2	
11	VAC						2	
12	AEC						3	
13	Minor	100-199		3	1	0	4	
Semester Credits							**22**	
SEMESTER III								
14	CC	ECO201	Intermediate Microeconomics - II	3	1	0	4	CC-5
15	CC	ECO202	Intermediate Macroeconomics - I	3	1	0	4	CC-6
16	MDC						3	
17	Minor	200-299					4	
18	AEC						2	
19	SEC						2	
20	VAC						2	
Semester Credits							**21**	
SEMESTER IV								
21	CC	ECO203	Intermediate Macroeconomics - II	3	1	0	4	CC-7
22	CC	ECO204	Basic Statistics	3	1	0	4	CC-8
23	CC	ECO205	Indian Economy	3	1	0	4	CC-9
24	SEC						2	
25	Minor						4	
26	VAC						2	

Semester Credits							**20**	
SEMESTER V								
27	CC	ECO301	Basic Econometrics	3	1	0	4	CC-10
28	CC	ECO302	Mathematical Economics	3	1	0	4	CC-11
29	CC	ECO303	Development Economics	3	1	0	4	CC-12
30	Minor	300-399					4	
31	SEC						2	
31	INT		Internship				4	
Semester Credits							**22**	
SEMESTER VI								
32	CC	ECO304	Advanced Econometrics	2	1	1	4	CC-13
33	CC	ECO305	Public Economics	3	1	0	4	CC-14
34	CC	ECO306	International Economics	3	1	0	4	CC-15
35	Minor	300-399						
36	SEC						2	
37	Project						4	
Semester Credits							**22**	
Total Credits of the Program after 3rd Year							**127**	
			SEMESTER VII					
38	CC	ECO401	Advanced Microeconomics	3	1	0	4	CC-16
39	CC	ECO402	Advanced Macroeconomics	3	1	0	4	CC-17
40	CC	ECO403	Topics in Econometrics	2	1	1	4	CC-18
41	CC (For With research)	ECO404	Research Methodology (should start working on dissertation topic)	3	1	0	4	CC-19 (Research)
42	CC (For Without research)	ECO405/ECO409	Industrial Economics/Resource and Environmental Economics	3	1	0	4	CC-19(without Research)
43	Minor						4	
Total Semester Credit							**20**	
			Semester VIII					
44	CC	ECO406	Topics in Development Economics	3	1	0	4	CC-20
45	CC (For Without research)	ECO407/ECO411	Labour Economics/ Political Economy of Development	3	1	0	4	CC-21 (without Research)

46	CC (For Without Research)	ECO408/ECO410	Introduction to Financial Markets operations and Instruments/Behavioral Economics	3	1		4	CC-22(without Research)
47	Minor	300-399					4	
48	Minor (For without research)	300-399					4	
49	Dissertation	400-499	Project/Dissertation	12	0	0	12	
Total Semester Credit							**20**	
Total Credits of the Program after 4th Year							**167**	

*NOTE: With research is only allowed for Students ***who secure 75% marks and above in the first six semesters***

Minors to be offered by Economics Department

1. ECO105: Introduction to Microeconomics – Sem I (Syllabus given at the end)
2. ECO106: Introduction to Macroeconomics – Sem II (Syllabus given at the end)
3. ECO102: Mathematics for Economics – Sem III (Same as in Core Course)
4. ECO205: Indian Economy – Sem IV (Same as in Core Course)
5. ECO301: Basic Econometrics- Sem V (Same as in Core Course)
6. ECO305: Public Economics – Sem VI (Same as in Core Course)
7. ECO303: Development Economics - Sem VII (Same as in Core Course
8. ECO306: International Economics – Sem VIII (Same as in Core Course)

Multi-Disciplinary (MDC) course

1. ECO107: Principles of Economics (Syllabus given at the end)

ADAMAS UNIVERSITY
PURSUE EXCELLENCE

Semester I

ECO101	Introduction to Microeconomics	L	T	P	C
Contact Hours	**60 hours**	**3**	**1**	**0**	**4**
Pre-requisites/Exposure	12^{th} level English and Mathematics				
Co-requisites	None				

Corse Objective:

Economic principles guide us to think like an economist. Business on the same side encounter a number of situation where this economic intuition and thinking may help to find viable solution and answers to the questions pertaining to a particular business problem. These problems may come from variety of contexts, for example, from micro operations of the business unit such as production and consumer demand or from macro environment such as a steep rise in overall price level in the economy. Therefore, in order to understand the reasons of such business problems and discover their solutions, a fundamental knowledge of economic principles is required. This course intends to give a glimpse of core principles of economics (micro principles, macro principles and some basic ideas of international economics) such as main problems of an economic system, fundamentals of demand and supply, consumer and producer surplus, concepts related national income etc. to the students. The course will be taught by lectures on core concepts supplemented with numerical analysis, case studies and small projects presentations by students.

Course Outcomes:

On completion of the course it is expected that students will be able to:
CO 1 Demonstrate the understanding of main principles of economics as applied to commerce and business.
CO 2 Apply economic reasoning to the analysis of questions pertaining to business immediately.
CO 3 Demonstrate the ability to interpret data in view of economic theories and evidences.

Course Content:

Unit I: Subject matter of microeconomics, importance of study(**2 hrs)**
Theory of demand: Marshallian approach – cardinal utility, diminishing marginal utility, equi-marginal utility, law of demand, elasticity of demand, market demand, demand forecasting**(8 hrs)**

Unit II: Theory of production: production function with one variable input; marginal, average and total productivity, stages of production, law of variable proportion**(4 hrs)**
Fixed cost and variable cost, relationship among marginal and average variable cost and marginal and average products**(4 hrs)**

Unit III: Revenue and profit, marginal revenue, price and price elasticity of demand, profit maximization objective of the firm**(4 hrs)**
Market structure: perfect vs imperfect competition, different types of imperfect competition (concepts and examples only)**(4 hrs)**
Equilibrium of a competitive firm, breakeven point and supply curve of firm, industry supply curve **(4 hrs)**
Competitive equilibrium, effects of taxes and price controls on price, consumer surplus, producer surplus and deadweight loss**(4 hrs)**
Monopoly equilibrium**(4 hrs)**

Unit X: Theory of distribution: marginal productivity theory of factor pricing; rent, interest and profit **(4 hrs)**

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text and Reference:

Core Text:

MankiwGergory N (2007). "*Principles of Economics".* India edition, Cengage learning, New Delhi.
Pindyck R. S., Rubinfeld D.L. and Mehta P.L. (2013). Microeconomics. Pearson, India, 7th edition.
Nicholson W. and Snyder C. (2017). Microeconomic Theory: Basic Principles and Extensions. Cengage. 12th Edition or latest.

Reference Readings:

Frank Robert H and Bernanke Ben S (2007), "*Principles of Economics".* Third edition. Tata McGrawhill Publishing limited, New Delhi.

Samuelson Paul A and Nordhaus William D (2005). *"Economics"*. Eighteenth edition. Tata McGrawhill Publishing limited, New Delhi.

Joseph Nellis and David Parker (2006). "*Principles of Business Economics*" 2nd Edition, Pearson paperback edition.

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Programme Outcomes**
CO1	Demonstrate the understanding of main principles of economics as applied to commerce and business.	**PO1, PO2**
CO2	Apply economic reasoning to the analysis of questions pertaining to business immediately.	**PO1, PO4**
CO3	Demonstrate the ability to interpret data in view of economic theories and evidences.	**PO3**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behaviour and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO101	Introductory Microconomics	3	3	3	3				

1=weakly mapped

2= moderately mapped , 3=strongly mapped

ECO102	**Mathematics for Economics**	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	12^{th} level Mathematics				
Co-requisites					

Course Objectives

This paper introduces students to the terminology and analytic principles used in microeconomics, which is broadly defined as the study of markets, and to the application of these conceptual tools to several policy issues. The objective of the course is to equip the students with mathematical analysis of various economic problems. The students will be able to understand the decisions of buyers and sellers and their interaction in market transactions will be analysed.

Course Outcomes:

On completion of this course, the students will be able to:

CO1.**Understand** the mathematical tools and their application in Economics.

CO2. **Develop** the knowledge of the use of mathematics essential to analyze single variable and multivariable economic problems.

CO3. **Apply** calculus in analysis of economic variables.

CO4. **Analyze**the use ofbasic algebra in economics. .

Course Content

Unit-I: Equations [10 lecture hours]

1.1.Exponents, 1.2. Polynomials. 1.3. Equations: Linear and Quadratic. 1.4. Simultaneous Equations.

1.5. Functions, 1.6. Graphs, Slopes and Intercepts. 1.7. Economic Applications of Graphs and Equations. 1.8. Examples and Application

Unit-II: Matrix Algebra [7lecture hours]

5.1. Definitions of matrix. 5.2. Addition and Subtraction and Multiplication. 5.3. Classification of matrix. 5.4. Determinant. 5.5. Inverse of a Square Matrix 5.7. Cramer's Rule.

Unit-III: Derivatives and Differentiation [10lecture hours]

2.1. Limits. 2.2. Continuity. 2.3. The Slope of a Curvilinear Function. 2.4. The Derivative. 2.5. Differentiability and Continuity. 2.6. Derivative Notation. 2.7. Rules of Differentiation. 2.8. Examples and Application.

Unit-IV: Application of Derivatives [6 lecture hours]

3.1. Increasing and Decreasing Function, 3.2. Concavity and Convexity, 3.3. Inflection Points, 3.4. Maxima and Minima.

Unit-V: Calculus of Multivariable Functions [6 lecture hours]

5.1. Partial differentiation. 5.2. Hessian determinant. 5.3. Homogeneous function and Euler's theorem

Unit-VI: Economic Application of Derivatives [6 lecture hours]
6.1 Price Elasticity of Demand, 6.2. Income Elasticity of Demand 6.3. Cross Elasticity of Demand, 6.4. Marginal Productivity. 6.5. Marginal Cost 6.6 Profit maximization.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Peer Tutoring
- Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

Edward T. Dowling, (2001) Introduction to Mathematical Economics, Schaum's Outline Series McGRAW-HILL

References:

R1. Simon, Carl. P., Blume, Lawrence. (2010). Mathematics for Economists, Norton.
R2. Sydseater, K., Hammod, P. (2002). Mathematics for Economics Analysis. Pearson Education India.
R3. Rosser, Mike (2003), Mathematics for Economists, Second Edition, Routledge.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Apply** the mathematical tools to analyze the economic problems.	**PO1, PO2, PO4, PO7**
CO2	**Develop** the knowledge of the use of derivative and integration techniques in economic framework.	**PO2, PO4, PO5, PO6, PO8**
CO3	**Apply** unconstrained and constrained optimization technique.	**PO1, PO2, PO6, PO7**
CO4	**Analyze**the use of difference and differential equations in real world economic activity in constant time and continuous time framework.	**PO1, PO2, PO6, PO7**

1=weakly mapped
2= moderately mapped
3=strongly mapped

ADAMAS UNIVERSITY
PURSUE EXCELLENCE

Semester II

ECO103	Intermediate Microeconomics - I	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	12th level English and Mathematics, Knowledge of Introductory Microeconomics				
Co-requisites	NA				

Course Objectives

This course introduces students to the terminology and analytic principles used in microeconomics, which is broadly defined as the study of markets, and to the application of these conceptual tools to several policy issues. The decisions of buyers and sellers and their interaction in market transactions will be analyzed. This also explores how different market structures can shape economic results, and how markets can sometimes (but not always) help society achieve desirable outcomes.

Course Outcomes:
On completion of this course, the students will be able to:
CO1. **Understand** the analytic principles used in microeconomics in individual decision making framework
CO2. **Apply** these conceptual tools to several policy making analysis in theoretical and empirical studies.
CO3. **Analyze** the decisions of buyers and sellers and their interaction in market transactions thereby shaping the equilibrium market outcomes.
CO4. **Analyze** the process and impact of different government interventions such as taxes on subsidies on equilibrium outcomes both in commodity and factor markets.

Course Content

Unit I: Consumer behaviour: indifference curve approach, revealed preference approach **(12 lectures)**

Unit II: Production function and producer behaviour with two variable inputs **(8 lectures)**

Unit III: Cost function: short run and long run relationship **(5 lectures)**

Unit IV: Objective of the firm: profit maximization, sales maximization subject to profit constraint, managerial theories of firms **(6 lectures)**

Unit V: Perfect competition: equilibrium of firm and industry in the short run as well as in the long run **(10 lectures)**

Unit VI: Stability of equilibrium: Marshall vsWalras**(4 lectures)**

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text and References

Core Text Books

T1. Intermediate Microeconomics: A Modern Approach. H.R. Varian. East West Press; 8th edition (2010).

T2. Modern Microeconomics. Koutsoyiannis. Palgrave Macmillan; 2nd edition, 2008.

T3. Nicholson W. and Snyder C. (2017). Microeconomic Theory: Basic Principles and Extensions. Cengage. 12th Edition or latest.

Reference Books:

R1. Microeconomics. R. S. Pindyck, D.L. Rubinfeld, and P.L. Mehta. Pearson, India, 7th edition, 2013

R2. Microeconomics: Theory and Applications. G.S. Maddala, and E. Miller. McGraw Hill Education (India) Private Limited; 3rd edition, 2004.

R3. Principles of Microeconomics. D. Salvatore. Oxford University Press (5th or later edition).

R4. Microeconomic Theory. Ferguson, and Gould. All India Traveler Book Sellers (6th edition).

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the analytic principles used in microeconomics in individual decision making framework	**PO1, PO2**
CO2	**Apply** these conceptual tools to several policy making analysis in theoretical and empirical studies.	**PO1, PO4**
CO3	**Analyse** the decisions of buyers and sellers and their interaction in market transactions thereby shaping the equilibrium market outcomes in different markets.	**PO1, PO4**
CO4	**Analyse** the process and impact of different government interventions such as taxes on subsidies on equilibrium outcomes both in commodity and factor markets.	**PO3**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO103	Intermediate Microeconomics I	3	3	3	3				

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO104	Introduction to Macroeconomics	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of economics				
Co-requisites	--				

Course Objectives

This course aims to introduce the students to the basic concepts of macroeconomics. Macroeconomics deals with the aggregative aspects of the economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course Outcomes

On completion of this course, the students will be able to

CO1. Understand different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.
CO2. Understand the macroeconomic tools used in policy making mainly in a closed economy.
CO3. Develop insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.
CO4. Analyze the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy.

Course Content

Unit 1: Introduction to Macroeconomics and National Income Accounting (12 hours)

Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices.

Unit 2: Money and Inflation (5 hours)

Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy, cost push and demand pull inflation.

Unit 3: The Closed Economy in the Short Run (10 hours)

Classical and Keynesian systems; simple Keynesian model of income determination;

Unit 4: Aggregate Demand and Aggregate Supply Curves (10 hours)

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

Unit 5: Open Economy and Balance of Payments (8 hours)

Concept of Balance of Payment- equilibrium and disequilibrium; Real versus nominal exchange rates; demand and supply of foreign exchange and determination of exchange rate

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text:

1.N.Gregory Mankiw. Principles of Macroeconomics, Cengage publishers, 2012

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

Reference Books:

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

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

3. Richard T. Froyen. Macroeconomics: Theories & Policies. Pearson Education; 10th Edition 2013.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.	**PO1, PO2, PO4**
CO2	**Understand** the macroeconomic tools used in policy making mainly in a closed economy.	**PO1, PO2, PO4**
CO3	**Develop** insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.	**PO1, PO2, PO4,PO6, PO7, PO8**
CO4	**Analyze** the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy	**PO1, PO2, PO4, PO6, PO7,PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO104	Introduction to Macroeconomics	3	3	_	3	_	2	2	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

Semester III

ECO201	Intermediate Microeconomics-II	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	12^{th} level English, Knowledge of introductory microeconomics				
Co-requisites					

Course Objectives

This course is designed to introduce students to more complicated issues of microeconomics that deals with the working of different imperfect market structures. The course aims to develop the knowledge of different types of pricing strategies and market power adopted by the producers, theoretical concepts of
the theories of distribution, welfare economics and an overall understanding of the decision-making processes of consumers and producers in an economy.

Course Outcomes

On completion of this course, the students will be able to:

CO1. **Understand** more complicated issues of microeconomics around different market structures under imperfect competition like monopoly, monopolistic competition, and oligopoly.

CO2. **Develop** knowledge on the conflicts of efficiency versus equity along with general idea of welfare discussed.

CO3. **Develop** basic knowledge of factor market.

CO4. **Understand** economic process that governs the production, distribution and consumption decisions.

Course Content

Unit I: Economics of imperfect competition: monopoly, price discrimination, monopolistic competition, oligopoly, duopoly, monopsony, bilateral monopoly **(20 lectures)**

Unit II: Theory of distribution: marginal productivity theory and product exhaustion theorem **(4 lectures)**

Unit III: Game theory, strategic decision making **(5 lectures)**

Unit IV: Uncertainty in decision making **(4 lectures)**

Unit V: Multi-market equilibrium **(4 lectures)**

Unit VI: Welfare economics: Pareto optimality **(8 lectures)**

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Peer Tutoring
- Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

1. Intermediate Microeconomics: A Modern Approach. H.R. Varian. East West Press; 8th edition (2010).
2. Modern Microeconomics. Koutsoyiannis. Palgrave Macmillan; 2nd edition, 2008.

Reference Books

1. Microeconomics. R. S. Pindyck, D.L. Rubinfeld, and P.L. Mehta. Pearson, India, 7thedition, 2013

2. Microeconomics: Theory and Applications. G.S. Maddala, and E. Miller. McGraw Hill Education (India) Private Limited; 3rd edition, 2004.

3. Principles of Microeconomics. D. Salvatore. Oxford University Press (5th or later edition).
4. Microeconomic Theory. Ferguson, and Gould. All India Traveler Book Sellers (6th edition).

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** more complicated issues of microeconomics around different market structures under imperfect competition like monopoly, monopolistic competition, and oligopoly.	**PO1, PO2, PO3**
CO2	**Develop** knowledge on the conflicts of efficiency versus equity along with general idea of welfare discussed.	**PO1, PO2, PO6, PO8**
CO3	**Analyze** major problems associated with market failure.	**PO1, PO2, PO6, PO7, PO8**
CO4	**Understand** economic process that governs the production, distribution and consumption decisions.	**PO1, PO2, PO6, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO201	Intermediate Microeconomics II	3	3	2	-	-	3	3	3

1=weakly mapped
2= moderately mapped 3=strongly mapped

ECO202	Intermediate Macroeconomics- I	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of economics				
Co-requisites	--				

Course Objectives

This course aims to introduce the students to the basic concepts of macroeconomics. Macroeconomics deals with the aggregative aspects of the economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context.

Course Outcomes

On completion of this course, the students will be able to

CO1. Understand different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.
CO2. Understand the macroeconomic tools used in policy making mainly in a closed economy.
CO3. Develop insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.
CO4. Analyze the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy.

Course Content

Unit 1: Introduction to Macroeconomics and National Income Accounting (8 hours)

Basic issues studied in macroeconomics; measurement of gross domestic product – the circular flow; The three way of measuring National Income of a country; The fundamental relations in the economy; real versus nominal GDP; price indices.

Unit 2: The Classical economics (10 hours)

Pre-classical economy; The classical theory of automatic full-employment in the economy; The vertical aggregate supply curve; Quantity Theory of Money and the theory aggregate demand; The role of interest rate- savings, investment and government deficit budget

Unit 3: The Keynesian Economics (14 hours)

The depression and the failure of the classical economics; Multiplier; the Keynesian theory of investment –savings balance leading to IS curve and money market balance leading to LM curve; The derivation of the aggregate demand curve; Keynesian labour market and the money wage rigidity; The aggregate demand curve; The multiplier theory; The money wage rigidity and derivation of the aggregate supply curve in the economy. The theory of involuntary unemployment

Unit 5: Open Economy macroeconomics (8hrs)
IS-LM-BP curves – models of capital inflows and exchange rate regimes

Unit 5: Unemployment and Expectations (5 hours)

Short-run trade-off between inflation and unemployment; Phillips Curve; Shifts in the Phillips curve; the role of expectation; Natural Rate of unemployment;

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text:

1. Richard T. Froyen. Macroeconomics: Theories & Policies. Pearson Education; 10th Edition 2013.
2. N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010

Reference Books:

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

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

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.	**PO1, PO2, PO4**
CO2	**Understand** the macroeconomic tools used in policy making mainly in a closed economy.	**PO1, PO2, PO4**
CO3	**Develop** insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.	**PO1, PO2, PO4,PO6, PO7, PO8**
CO4	**Analyze** the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy	**PO1, PO2, PO4, PO6, PO7,PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO202	Intermediate Macroeconomics- I	3	3	–	3	–	2	2	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

Semester IV

ECO203	INTERMEDIATE MACROECONOMICS-II	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	10+2 passed from any recognized Board or equivalent				
Co-requisites	--				

Course Objectives

This course is a sequel to Intermediate Macroeconomics II. After revisiting the classical and Keynesian systems taught in the previous macroeconomic courses, in this course, the students are also introduced to the micro-foundations to the various aggregative concepts used in the previous course. The theories related to consumption, investment and growth models are dealt in depth. The course engages debates and critics related to different schools of macroeconomic thought. In addition, it covers the long run dynamics of growth models and technological progress also.

Course Outcomes:

At the end of the course, the student will be able to:

CO1: **Understand** the functioning of the economy in macro frame and its policy issues

CO2: **Learn** modern macroeconomic theories related to consumption, investment, growth, the long run dynamic issues like economic growth and technological progressetc.

CO3: **Develop** knowledge on open economy macroeconomics and different models

CO4: **Analyse** different macroeconomic policies and its impact on economy

Course Content

Unit 1: An overview of Post-Keynesian theories of unemployment and inflation (16 hrs)

Keynes versus Classics, Rational Expectations and Phillips curve, Neo-Keynesian approach towards wage and price rigidities

Unit 2: Consumption Theories (10

hrs)

Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses;

Unit 3: Investment Theories (5 hrs)

Determinants of business fixed investment; residential investment and inventory investment.

Unit 4: Money and Inflation (6 hrs)

Determination of money supply and demand; credit creation; tools of monetary policy, cost push and demand pull inflation.

Unit 5: Economic Growth (8hrs)

Harrod-Domar model, Solow model, golden rule, technological progress and introduction of endogenous growth.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term

Weightage (%)	**50**	**50**

Text Books

1. N. Gregory Mankiw. Macroeconomics, Worth Publishers; 7th edition (2009).
2. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill Education; 12th edition (2018)
3. Richard T Froyen. Macroeconomics: Theories and Policies, Pearson Education India; 10th edition (2013)

Reference Books

1. Olivier Blanchard, Macroeconomics, Pearson Education, Inc., 5th edition, 2009
2. Steven M. Sheffrin, Rational Expectations, Cambridge University Press, 2nd edition, 1996.
3. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and Pos		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the functioning of the economy in macro frame and its policy issues	**PO1, PO2, PO3, PO4**
CO2	**Learn** modern macroeconomic theories related to consumption, investment, growth, the long run dynamic issues like economic growth and technological progressetc.	**PO4, PO7**
CO3	**Develop** knowledge on open economy macroeconomics and different models	**PO2, PO8**
CO4	**Analyse** different macroeconomic policies and its impact on economy	**PO4, PO5, PO6**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO203	INTERMEDIATE MACROECONOMICS- II	3	3	2	1	-	3	3	1

1=weakly mapped
2= moderately mapped 3=strongly mapped

ECO204	Basic Statistics	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Set theory and logical thinking.				
Co-requisites	-				

Course Objectives

The main objective of this course is to train the students to use the techniques of statistical analysis, which are commonly applied to understand and analyze economic problems. The paper deals with simple tools and techniques, which will help a student in data collection, presentation, and to understand the basic descriptive properties of the data. This paper introduces the concept of bivariate data and their application in real life. A major emphasis is given on the fundamental knowledge of probability where the true essence of statistics lies.

Course Outcomes

After completing this course, a student will

CO1: Understand different types of data and data collection methods in the field of economics.
CO2: Demonstrate the fundamental knowledge of central tendency, dispersion, skewness and kurtosis using various microeconomic and macroeconomic variables.
CO3: Understand correlation analysis and basic ideas about regression using economic variables to obtain the basic ideas of bivariate data.
CO4: Analyse the nature of different economic time series using various methods.
CO5: Develop insights about probability along with its application on Bayes' theorem.

Course Content

Unit-I: Introduction to Statistics [7 Hours]

Basic concepts: Population, Sample, Parameter; Techniques of data collection- Sampling vs. Population, primary and secondary data. Classification and presentation of data. Graphic and diagrammatic representation of data. Frequency distribution and its diagrammatic representation.

Unit-II: Measures of Central Tendency [8 Hours]

Arithmetic Mean, Median and Mode for grouped and ungrouped data, Comparison of Mean, Median and Mode, Geometric and Harmonic Mean, Composite Mean.
Application: Index Numbers: Index number as weighted averages, Price and quantity index numbers, Cost of Living Index Number, Wholesale Price Index, Stock market indices.

Unit-III: Measures of Dispersion [8 Hours]

Range, Mean Deviation, Quartile Deviation and Standard Deviation, Measures of Relative Dispersion, Curve of Concentration, Moments, Central and non-central moments, Skewness, Kurtosis, different measures of skewness and kurtosis.

Application: Measurement of Economic Inequality: Gini Coefficient and Lorenz Curve.

Unit-IV: Bivariate Data **[6 Hours]**

Definition of bivariate data, scatter diagram, bivariate frequency distribution-Simple and multiple correlation and regression. Covariance as a measure of association; Coefficient of Correlation; Rank correlation; Difference between correlation and regression approach

Unit-V: Time series analysis and forecasting methods **[8 Hours]**

Introduction and analysis of a time series, trend method, time series method, correlation regression method, End–Use method, exponential smoothing method, Delphi method, demand forecasting for industrial products.

Unit-VI: Probability Theory **[8 Hours]**

Elements of Probability Theory: Sample Space, Probability Space, Events, Classical Definition of Probability. The Addition Rule, the Multiplication Rule, Theorems of Total Probability, Conditional Probability and Statistical Independence, Limitations of the Classical definition, Axiomatic Approach, total probability theorem, Bayes' Rule and its applications.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text:

Goon, Gupta, Dasgupta – Fundamentals of Statistics, Vol I, World Press Private limited (2016).

Reference Books:

1. Lind, Marchal, Wathen. Basic Statistics for Business and Economics, McGraw Hill Education; Seventh edition (2013).

2. Gupta C B, Gupta V. An Introduction to Statistical Methods, Vikas Publishing House, New Delhi.

3.Gupta, S. C., and Kapoor, V. K. Fundamentals of Mathematical Statistics. Sultan Chand & Sons (2014).

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** different types of data and data collection methods in the field of economics.	PO1, PO2
CO2	**Demonstrate** the fundamental knowledge of central tendency, dispersion, skewness and kurtosis using various microeconomic and macroeconomic variables.	PO1, PO2, PO3
CO3	**Understand** correlation analysis and basic ideas about regression using economic variables to obtain the basic ideas of bivariate data	PO1, PO2, PO3, PO6, PO7, PO8
CO4	**Analyse** the nature of different economic time series using various methods.	PO1, PO2, PO3, PO6, PO7, PO8
CO5	**Develop** insights about probability along with its application on Bayes' theorem.	PO1, PO2, PO6, PO7, PO8

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO204	Basic Statistics	3	3	2	_	_	2	2	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO205	Indian Economy	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	10+2 passed from any recognized Board or equivalent				
Co-requisites	--				

Course Objectives

The primary objective of this course is to provide a macroeconomic understanding of the Indian Economy since Independence. It begins with a discussion of the economic backdrop of the Indian Economy at the time of Independence and goes on to examine major dimensions of the economy's transformation both in its dirigisme and liberal phases while also engaging with the reasons for the transition from the one to the other. This course will be relevant to the students in terms of the overall Indian economic experience since independence. The basic trajectory of Indian economic development is to be covered with special emphasis on the shift from a mixed economy towards market orientation and the effect of the reforms on it.

Course Outcomes

On completion of this course, the students will be able to

CO1. **Explain** the economic development strategy of India since Independence.
CO2. **Understand** the importance of planning undertaken by the government of India, have Knowledge on the various objectives, failures and achievements of planning.
CO3. **Illustrate** the de-industrialisation process and emergence of modern industries and service sector.
CO4. **Analyse** the globalization process, reform policies and its diverse ramifications on the Indian economy.

Unit I: [3 HRS]
Indian Economy at the time of Independence

Indian economy at Independence: Underdevelopment in colonial rule.

Unit II: [12 HRS]
Planning: Evolution of India's Development Goal and Strategy
Five Year Plans: Background and structure of planning; Development Goals and Strategies; Structural Constraint; Objective, Achievement and Failures of Planning; NITI AAYOG.
Nehruvian Paradigm vs Gandhian Paradigm; Mahalanobis Model; Closed to Open Economy; Import Substitution and Export Promotion; Exchange Rate Regimes; Regional Imbalance.

Unit III: **[10 HRS]**
New Reform Policy: NEP

Secret Reforms in 1960s; 7th Plan and the Economic Crisis in the 1980s; Early Reforms.
NEP: BoP crisis, NEP Reform; Liberalization, Privatization and Globalization; Sectoral Reform: Industry, Fiscal, Finance, External sector reforms.
Structural Changes in Indian Economy.

Unit IV: Sectoral Performance **[10 HRS]**

Agriculture: Situation in Indian Agriculture; Land Reform; Green Revolution and regional politics; Cooperative Movement; Rural Credit.

Industry: Structure of Indian Industry; Industrial development under planning; Performance of public sector; Structural changes and slowdown.

Service Sector: Service led growth. Inclusive Development. Productivity. Export competitiveness.

Inclusive development: Food security; procurement and PDS.

Unit V: Growth and Distribution **[5 HRS]**

Trends in GDP and Per capita GDP; Growth, Poverty and Inequality; Unemployment and under employment- Informalization and Tertiarization of employment.; policy.

Unit VI: **[5 HRS]**
Second Generation Reforms, Post Crisis Policies

Indian Economy in New Millennium; Neo colonial development and challenges; Economic performance, problems and dangers, Informalization and tertiarization of economy.

Second Generation reform in India: Major public sector reforms since 2014; Demonetization; New Agricultural Reforms, Labor Reforms, New Education Policy.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation

- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Peer Tutoring
- Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

1. Indian Economy: Performance and Policies. Uma Kapila. Academic Foundation; 15th Revised edition (2015)
2. Prakash, B. A. (2009). The Indian Economy Since 1991: Economic Reforms and Performance. Pearson Education India.

Reference Books

1. Chandra, B., Mukherjee, A., & Mukherjee, M. (2008). India Since Independence. Penguin Books India.
2. Basu, Kaushik. An Economist in the Real World. Viking (2016)
3. Roy, T. (2006). The Economic History of India, 1857-1947 (2nd ed.). Oxford University Press.
4. Agarwal, A.N. (2009)- Indian Economy, New Delhi: New Age International Publishers
5. The Indian Economy: Problems and Prospects. Bimal Jalan (ed.); Penguin
6. S Chakraborty. 1987. Development Planning: The Indian Experience. Clarendon Press.

7. I, Judge Ahluwalia. 1985. Industrial Growth in India since the Mid-sixties. Oxford University Press.

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Explain** the economic development strategy of India since Independence.	**PO1, PO5, PO6, PO8**
CO2	**Understand** the importance of planning undertaken by the government of India, have Knowledge on the various objectives, failures and achievements of planning.	**PO1, PO4, PO5, PO8**
CO3	**Illustrate** the de-industrialisation process and emergence of modern industries.	**PO1, PO4, PO5**
CO4	**Analyse** the globalization process and its diverse ramifications on the Indian economy.	**PO1, PO4, PO5, PO6, PO7, PO8**

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

			Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code		Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO205		Indian Economy	3			3	2	2	1	3

1= weakly mapped; 2=moderately mapped; 3 = strongly mapped


ADAMAS
UNIVERSITY
PURSUE EXCELLENCE

ECO206	**Money, Banking and Financial Markets**	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	ECE 42106 / Building Planning & Materials				
Co-requisites	-				

Course Objectives:

This course is designed to introduce undergraduate economics students to the basic concepts of financial assets, banking, financial markets and financial regulation. This knowledge is useful in competitive examinations. The course also intends totrain the learner's mind set to analyse the existing models/frames to resolve an issue. The course plans to teach the intricacies of the interconnected working of various functional divisions of the banks and financial markets such that the students can join industry in positions pertaining to finance, banking and financial markets.

Course Outcomes:

CO1**. Understand** generation of aggregate demand through lending by banks with a focus on investment activities and consequent expansion of the economy's output.
CO2. **Assess** how aggregate output generates income in the hand of households, corporates and the government, a part of which is saved and channelized to the financial sector towards acquisition of financial securities.
CO3. **Develop** the abilityto sit in competitive examinations.
CO4**Develop** the ability to join industry in positions pertaining to finance, banking and financial markets.

Course Content

Unit 1: Introduction to Banking (10 Hours)

- Concept of Financial Intermediaries
- Definition and Functions of Bank
- Structure of the Banking Industry
- Role of Banks in Creation of Money: The Lending Process
- The Money Multiplier Process
- Regulations on Lending

Unit 2: Introduction to Financial Markets (10 Hours)

- Concept of Financial Market
- Money Market vis-à-vis Capital Market
- Concept of Financial Securities and their Credit Rating
- Concept of Issuer and Investor in the Financial Markets
- The role played by financial markets in determination of yields through price discovery
- The Concept and Construct of Yield Curve
- The Role of Yield in Income Determination

Unit 3: Regulator and Regulation (15 Hours)

- Introduction to Central Banking and Monetary Policy
- RBI Regulations on Lending
- Role of CRR and SLR in determining the volume of loans
- Auction and buy back of government securities by RBI in open market operations
- Money Markets Operations by RBI - Repo, Reverse Repo and Marginal Standing Facility
- Role of RBI in creation of a vibrant debt market
- NPA and Securitization

Unit 4:International Finance and Monetary Policy (10 Hours)

- The Foreign Exchange Market
- The International Financial System
- Monetary Policy Strategy: The International Experience
- Lessons from Banking and Financial Crises

Reference Books

Mankiw, N. Gregory author. (2016). Macroeconomics. New York :Worth Publishers,

Bhole, L. M., & Mahakud, J. (2017). *Financial institutions and markets: structure growth and innovations*. McGraw-Hill.

Sikdar, S. (2020). *Principles of macroeconomics*. Oxford University Press.

Dornbusch, R. and Fischer, S. (2000) Macroeconomics. 6th Edition.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping

- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and Pos		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** generation of aggregate demand through lending by banks with a focus on investment activities and consequent expansion of the economy's output.	**PO1, PO2, PO4, PO6, PO7, PO8,**
CO2	**Assess** how aggregate output generates income in the hand of households, corporates and the government, a part of which is saved and channelized to the financial sector towards acquisition of financial securities.	**PO1, PO2, PO4, PO6, PO7, PO8,**
CO3	**Develop** the abilityto sit in competitive examinations.	**PO1, PO2, PO4, PO6, PO7, PO8,**

CO4	**Develop** the ability to join industry in positions pertaining to finance, banking and financial markets	**PO1, PO2, PO4, PO6, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO206	Money, Banking and Financial Markets	3	3	_	3	_	2	2	1

1=weakly mapped
2= moderately mapped
3=strongly mapped

Semester V

ECO301	BASIC ECONOMETRICS	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of Mathematics at 10+2 level				
Co-requisites	Knowledge of Microeconomics and Macroeconomics				

Course objectives

Econometrics is concerned with the application of statistical theory to the analysis of economic data and the estimation of economic relationships. This course intends to expose students to the statistical techniques that economists use for estimating, testing, and forecasting economic relationships. In this paper students will be introduced with what 'Econometrics' is about. The basic concept of linear regression model under classical assumptions, statistical inference tools and techniques in a regressed model will be taught in a lucid approach. Moreover, the consequences of violations of classical assumptions will also be taught. This course covers a range of applications through statistical software.

Course Outcomes:

At the end of the course, the student will be able to:

CO1: **Understand** the econometrics as a discipline, its importance and various statistical techniques that economists use for estimating, testing, and forecasting economic relationships.

CO2: **Demonstrate** the basic concept of simple linear regression model under classical assumptions.

CO3: **Understand** the tools and techniques of statistical inference mainly in a simple linear regression model.

CO4: **Develop** insights aboutthe sources, the consequences of violations of classical assumptions and the tests associated with it.

CO5: **Apply** the econometric tools to the analysis of economic data and the estimation of economic relationships.

Course Content:

Unit I: Introduction to Econometrics [4 Hrs]

What is Econometrics? Steps in Econometric Analysis; Specification of Econometric Model and Assumptions; Basic Concepts of Estimation and Desirable Properties of Estimators; Data for Econometric Analysis.

Unit-II: Properties of a good estimator **[5 Hrs]**

Basic concepts of estimation: Desirable properties of estimators, Methods of Point Estimation - Maximum Likelihood Estimators and their properties.

Unit III: Classical Linear Regression Model **[8 Hrs]**

Stochastic and non-stochastic relationships; The concept of regression, Two Variable Case, Specification of the relationship; Estimation- Method of Least Squares, Assumptions; Gauss-Markov Theorem; Properties of Least Squares estimates; BLUE.

Unit IV: Statistical Inference in Classical Linear Regression Model **[12 Hrs]**

Testing of Hypothesis: Confidence Intervals, p-values, Type-I and Type-II Errors, Simple applications of tests for the Mean and Variance of a Univariate Normal Population.

Statistical Inference in simple linear regression model- Confidence Intervals for parameters, Testing of Hypothesis-Testing of regression coefficient; Test for regression as a whole, Coefficient of determination, Goodness of Fit, F-test, Analysis of Variance.

Unit V: Violations of Classical Assumptions and Remedies **[8 Hrs]**

Problems of Heteroscedasticity; Auto correlation (first order) — their consequences, tests and remedies.

Unit VI: Application of Econometric Methods **[8 Hrs]**

Estimation of demand functions, production and cost functions

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text Books:

1. Damodar N. Gujarati, Dawn C. Porter, and SangeethaGunasekar. Basic Econometrics. McGraw Hill Education (India) Private Limited; 5th edition (2011)

2. G. S. Maddala, KajalLahiri. Introduction to Econometrics. Wiley India Pvt Ltd; 4th edition (2012)

Reference book:

1. Jeffrey M. Wooldridge. Introductory Econometrics: A Modern Approach Cengage Learning India Pvt. Ltd.; 5th edition (2014)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the econometrics as a discipline, its importance and various statistical techniques that economists use for estimating, testing, and forecasting economic relationships.	**PO1, PO2**
CO2	**Demonstrate** the basic concept of simple linear regression model under classical assumptions.	**PO1, PO2**
CO3	**Understand** the tools and techniques of statistical inference mainly in a simple linear regression model.	**PO1, PO2, PO3, PO8**
CO4	**Develop** insights aboutthe sources, the consequences of violations of classical assumptions and the tests associated with it.	**PO1, PO2, PO3, PO8**
CO5	**Apply** the econometric tools to the analysis of economic data and the estimation of economic relationships.	**PO1, PO2, PO3, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code EC301	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO11015	Basic Econometrics	3	3	2	_	_	_	1	2

1=weakly mapped 2= moderately mapped
3=strongly mapped

ECO302	**Mathematical Economics**	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	12^{th} level English				
Co-requisites					

Course Objectives

This paper introduces students to the terminology and analytic principles used in microeconomics, which is broadly defined as the study of markets, and to the application of these conceptual tools to several policy issues. The objective of the course is to equip the students with mathematical analysis of various economic problems. The students will be able to understand the decisions of buyers and sellers and their interaction in market transactions will be analysed.

Course Outcomes:

On completion of this course, the students will be able to:

CO1. **Apply** the mathematical tools to analyze the economic problems.

CO2. **Develop** the knowledge of the use of derivative and integration techniques in economic framework.

CO3. **Apply** unconstrained and constrained optimization technique.

CO4. **Analyze**the use of difference and differential equations in real world economic activity in constant time and continuous time framework.

Course Content

Unit-I: Linear Models and Matrix Algebra [8 Hours]

Vector Spaces, Linear Transformations, Matrices, Linear Equations and Determinants, Cramer's Rule. Applications

Unit II: Unconstrained Optimization [8 lecture hours]

Concept of optimization. First-order conditions, Second-order conditions, Global maxima and minima. Applications- Profit maximization, Inventory control, Comparative static effects of taxes.

Unit-III: Constrained Optimization [14 lecture hours]

Constrained optimization and resource allocation, Equality Constraints, Inequality Constraints. The Lagrangean technique for optimization: constrained optimization with two variables, first order condition, second-order conditions; Constrained optimization with more than two variables. Application: Consumer's utility maximization, Firm's cost minimization; Kuhn-Tucker Formulation- Non-negativity restrictions, Inequality constraints, Interpretation;

Envelope Theorem- for unconstrained optimization, for constrained optimization. Interpretation of Lagrange multiplier.

Unit-IV: First Order Difference Equation: Discrete Time [10 lecture hours]
Discrete time, Differences, and Difference Equation; Solving a first order difference equation;. Application: The Cobweb Model.

Unit-V: First Order Differential Equation: Continuous Time [5 lecture hours]
Continuous time, Differential Equations. First order differential equation- Solving linear differential equation. Applications.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Peer Tutoring
- Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text
T1. Chiang, Alpha and Kevin Wainwright (2013), Fundamental Methods of Mathematical Economics, Fourth Edition, McGraw-Hill
References:

R1. Simon, Carl. P., Blume, Lawrence. (2010). Mathematics for Economists, Norton.
R2. Sydseater, K., Hammod, P. (2002). Mathematics for Economics Analysis. Pearson Education India.
R3. Rosser, Mike (2003), Mathematics for Economists, Second Edition, Routledge.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Apply** the mathematical tools to analyze the economic problems.	**PO1, PO2, PO3,PO4, PO7**
CO2	**Develop** the knowledge of the use of derivative and integration techniques in economic framework.	**PO2, PO3, PO4, PO5, PO6, PO8**
CO3	**Apply** unconstrained and constrained optimization technique.	**PO1, PO2, PO3, PO6, PO7**
CO4	**Analyze**the use of difference and differential equations in real world economic activity in constant time and continuous time framework.	**PO1, PO2, PO3, PO6, PO7**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO 3	PO4	PO5	PO6	PO7	PO8
ECO302	Mathematical Economics	3	3	3	3	1	-	2	2


ADAMAS
UNIVERSITY
PURSUE EXCELLENCE

1=weakly mapped 2= moderately mapped 3=strongly mapped

ECO303	Development Economics	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	10+2 passed from any recognized Board or equivalent				
Co-requisites	--				

Course Objectives:

This course aims at a basic introduction to the ideas of growth and development. A chronological development of the measures of development and the major theoretical works is to be attempted to make it clear to the students that development is a multidimensional process and need to be addressed accordingly. Concept of poverty, inequality and also to learn about commonly used inequality and poverty measures are also discussed. Finally, the recent advances in the direction of free trade as a vehicle of development are to be discussed.

Course Outcomes

On completion of this course, the students will be able to

CO1. **Understand** the core economic principles, concepts and theories of modern economic analysis and various economic development issues.

CO2. **Explain** the interplay between markets, institutions and income distribution in causing and perpetuating underdevelopment; the inequalities between rich and poor countries and how the differences have evolved over time.

CO3. **Analyze** effects of economic growth on inequality and poverty ; the empirical evidence on the patterns of economic development.

CO4. **Assess** the effectiveness of various policies in combating underdevelopment.
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Course Content

Unit-1: Concepts and measures of development (15 Hrs)

Nature, Questions and Values of Development, Meanings of development – economic growth, redistribution form growth and capabilities approach to development, objectives of development. Measures of development- purchasing power parity and per capita income as an index of development, difference between growth and development, human development index, characteristics of a developing economy.

Unit-2: Development theories (15 Hrs)

Underdevelopment as a coordination failure, multiple equilibria, different approaches- vicious cycle of poverty, circular causation, the Big Push, balanced and unbalanced growth;
Dual economy Models- Lewis, Harris-Todaro, Trap models- Nelson and Leibenstein, Choice of technique in a labour suplus economy, Two gap model, Dualism.

Unit 3: Development- Population, Inequality and Poverty (15 Hrs)

Concepts of Population: definitions of fertility, mortality, birth rates, death rates, fertility rate, life expectancy, infant mortality rate, youth dependency ratio; Theory of demographic transition.
Meaning of inequality, Measures of Inequality - Lorenz Curve, Range, Coefficient of variation, Gini-coefficient, Kuznet's Inverted U hypothesis.
Poverty, relative and absolute deprivation with respect to income, Poverty line, Poverty measures– Head count ratio, Poverty gap ratio, Income gap ratio, Human Poverty Index.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text Books

T1. Thirlwall,*Growth and Development*, Palgrave McMillan; 8th edition (2010)
T2. Todaro, and Smith. *Economic Development*, Pearson India; 10th edition (2011)

Reference Books

R1 D. Ray,*Development Economics*, Oxford University Press; 1st edition (1999)
R2 S. Gupta, and A. K. Mohapatra. *Recent Economic Growth in India: Contemporary Issues.*Prateeksha Publications (2011)
R3. K. Basu. *Analytical Development Economics: The Less Developed Economy Revisited*. Oxford University Press.
R4. G.M. Meier and J.E. Rauch.*Leading Issues in Economic Development*. Oxford University Press. (2005)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and Pos		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** the core economic principles, concepts and theories of modern economic analysis and various economic development issues.	**PO1,PO3**
CO2	**Explain** the interplay between markets, institutions and income distribution in causing and perpetuating underdevelopment; the inequalities between rich and poor countries and how the differences have evolved over time.	**PO4, PO5**
CO3	**Analyze** effects of economic growth on inequality and poverty ; the empirical evidence on the patterns of economic development.	**PO6,PO7**
CO4	**Assess** the effectiveness of various policies in combating underdevelopment.	**PO2, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO303	Development Economics	3	3	2	1	2	3	3	1

1=weakly mapped
2= moderately mapped
3=strongly mapped

Semester VI

ECO304	ADVANCED ECONOMETRICS	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of Mathematics at 10+2 level				
Co-requisites	Knowledge of Microeconomics and Macroeconomics				

Course objectives

This course aims at developing the knowledge of theoretical aspects of important advanced econometric techniques. It intends to make students understand when and how to apply a particular advanced econometric technique. The course discusses the intricacies of different advanced econometric analytical tools so that students become aware of the advantages and limitations of different methods before they apply them to practical data sets. This course aims at offering adequate theoretical knowledge and developing basic skill for data analysis required for higher studies and/or in professional fields.

Course Outcomes:

At the end of the course, the student will be able to:

CO1: **Understand** the basic aspects of multiple linear regression models and the limitations they face.

CO2: **Demonstrate** the tools and techniques of statistical inference in a multiple linear regression model.

CO3: **Develop** insights aboutconcept and use of dummy independent variables and dependent variable dummy regression models.

CO4: **Develop** ideas about different econometric techniques applied to time series data.

CO5: **Apply** the econometric tools to the analysis of cross section and time series economic data and the estimation of economic relationships.

Course Content:

Unit 1: Introduction to Multiple Linear Regression Models [10 hours]

Multiple Linear Regression with Two Independent Variables, Multiple Linear Regression with k Independent Variables, Methods and Interpretation of OLS Estimates, Meaning of Partial Impact, Fitted Values and Residuals, Goodness of Fit, MANOVA, Comparison of Simple and Multiple Regression Estimates, Inclusion of irrelevant variables, Omitted Variable Bias,

Variance of OLS Estimates, Efficiency of OLS estimates, Consequences of Heteroskedasticity, Multicollinearity and Autocorrelation

Unit 2: Multiple Linear Regression: Statistical Inference [9 hours]

Sampling Distribution of OLS Estimators in MLRM, Hypotheses testing: One Sided and Two sided t Tests, P values, Statistical versus Economic significance, Confidence Intervals, Hypothesis Testing about linear combination of parameters, The use of F Test to Test Multiple Linear Restrictions, The Relationship between the F Test and The R Squared Values, The Adjusted R Squared

Unit 3: Use of Dummy Independent Variables [10 Hours]

Concept of Dummy Variables, Multiple Linear regression model with Dummy Independent qualitative) Variable with Two Categories, Use of Dummy Variables with More than Two Categories, Dummy Variable Trap, The Concept of Intercept Dummy, Interaction of Two Categorical Variables-Interaction Dummy; Interaction of Categorical and Continuous (quantitative) Variables- Slope Dummy

Unit 4: Dynamic Econometric Models [8 Hours]

The role of time and lag in economics, distributed lag models, The Koyck approach, The Adaptive Expectations Model, The Partial Adjustment Model, Autoregressive Models

Unit 5: Introduction to Time Series Econometrics [8 Hours]

The Concept of Time Series Regression, Stochastic process, The Concept of Stationarity of Time Series Data, White Noise, Random Walk, Unit Root Stochastic process, Test for stationarity, Autocorrelation Function (ACF), Partial Autocorrelation Function (PACF), Unit Root test, Dickey-Fuller test, Augmented Dickey-Fuller test (ADF)

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring

- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

1. Jeffrey M. Wooldridge. Introductory Econometrics: A Modern Approach Cengage Learning India Pvt. Ltd.; 5th edition (2014)

Reference Books:

1. Damodar N. Gujarati, Dawn C. Porter, and SangeethaGunasekar. Basic Econometrics. McGraw Hill Education (India) Private Limited; 5th edition (2011)

2. G. S. Maddala, KajalLahiri. Introduction to Econometrics. Wiley India Pvt Ltd; 4th edition (2012)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the basic aspects of multiple linear regression models and the limitations they face.	**PO1, PO2**
CO2	**Demonstrate** the tools and techniques of statistical inference in a multiple linear regression model.	**PO1, PO2**
CO3	**Develop** insights aboutconcept and use of dummy independent variables and dependent variable dummy regression models.	**PO1, PO2, PO3, PO8**

CO4	**Develop** ideas about different econometric techniques applied to time series data.	**PO1, PO2, PO3, PO8**
CO5	**Apply** the econometric tools to the analysis of cross section and time series economic data and the estimation of economic relationships.	**PO1, PO2, PO3, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO304	Advanced Econometrics	3	3	2	–	–	–	1	2

1=weakly mapped 2= moderately mapped 3=strongly mapped

ECO306	International Economics	L	T	P	C
	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Exposure to Basic Economic Theory				
Co-requisites	NA				

Corse Objective:

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics developed in earlier courses, focusing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

Course Outcomes:

On completion of the course it is expected that students will be able to:

CO1. Define fundamentals of international trade and trade policy.
CO2. Understand how international monetary system works.
CO3. Evaluate macroeconomic policy options in open economy settings.

Course Contents:

Unit I. Introduction5 hrs
What is international economics about? An overview of world trade.

Unit II. Theories of International Trade 17 hrs
The Ricardian, specific factors, and Heckscher-Ohlin models; Factor price equalisation, Stolper Samuelson and Rybczinski theorems, Empirical validation and Leontief Paradox, new trade theories; the international location of production; firms in the global economy — outsourcing and multinational enterprises.

Unit III Trade Policy12 hrs
Partial Equilibrium Analysis: Tariff - cost–benefit, Quota, Quota- Tariff equivalence, effects of tariff, quota, subsidy and voluntary export restraint; General
Equilibrium Analysis- distinction between large and small economy, welfare effects of
a tariff on small country and large country, Offer curve and ToT, Tariff ridden offer

curve, Optimum tariff for large economy, Metzler's Paradox.

UNIT IV Balance of Payments & Exchange Rate 11hrs

Balance of Payment accounts in an open economy; Determination of National Income, Transfer problem, Introduction of foreign Country & repercussion effect - open economy multiplier with & without repercussion effect; Fixed &Flexible Exchange Rate: adjustment of demand and supply of Foreign Exchange, Effect of devaluation, Effects of exchange rate on domestic prices and ToT, Marshall-Lerner Condition, JCurve effect.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text and Reference:

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory*

and Policy, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.

2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Programme Outcomes**
CO1	Define fundamentals of international trade and trade policy	**PO3 & 6**
CO2	**U**nderstand how international monetary system works.	**PO3 & 4**
CO3	Evaluate macroeconomic policy options in open economy settings.	**PO5**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO305	International Economics			3	2	3	2		

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO305	Public Economics	L	T	P	C
Version 2.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic exposure of Micro and Macroeconomics				
Co-requisites	--				

Course Objectives:

This paper aims at analysing and explaining the Government budget, public expenditures and taxation and their components. The subject encompasses a host of topics including VAT, GST, public goods, market failures, and externalities. The course intends to develop students' analytical and consulting skills in the area of public finance. It will introduce students to the public sector reform agenda with a focus on public finance issues. The course will help students to study public policy from the points of view of economic efficiency and equity. The study is a blend of theoretical developments, issues and problems confronted by India and their proposed and adopted solutions. The course aims to develop analytical skills of the students in major areas of public finance and train students to critically analyse government budgets and fiscal policy.

Course Outcomes:

On completion of this course, the students will be able to

CO1. **Identify** and analyse government budgets, debt, public expenditures
CO2. **Understand** various theories of tax incidence and various types of tax structure
CO3. **Analyse** critically public goods and market failures
CO4. **Analyse** public policy from the points of view of economic efficiency and equity.

Course Content

Unit 1: Introduction to Public Finance [4 lecture hours]

Functions of Government - Economic functions -allocation, distribution and stabilization; Regulatory functions of the Government and its economic significance;

Unit 2: Public Expenditure and Public Goods [12 lecture hours]

Private goods and Pareto allocations – Edgeworth box approach - Concept of public goods—characteristics of public goods; national vs. local public goods; determination of provision of

public good; Externality, concept of social versus private costs and benefits; merit goods, club goods; Provision versus production of public goods; Market failure and public provision – externalities, natural monopoly

Unit 3: Collective choice problems [4 lectures]
Arrows's impossibility theorem under majority voting- solution to the paradox

Unit 4: Principles of Taxation [4 lectures]
Benefit principle (Bowen- Lindahl- Samuelson) – Ability to Pay Principle

Unit 5: Effects of Taxation [12 lectures]
Effect of unit and ad valorem taxes on price and output under different market conditions – effect on taxes on wage on work effort- effect of a profit tax on work effort under collective bargaining

Unit 6: Fiscal policy and stabilisation [9 lecture hours]

Fiscal policy and built-in stabilisers, public debt and intergenerational burden, India's public finance scenario

Core Text:

1. Musgrave and Musgrave: Public Finance in Theory and Practice (Fifth Edition).
2. Brown, C.V. and P.M. Jackson: Public Sector Economics, Wiley- Blackwell, 1991 (4th edition)
3. Musgrave, Richard : Public Finance, McGraw Hill

Reference Books:

4. Gruber J: *Public Finance and Public.* Worth Publishers
5. AmareshBagchi (ed.). Readings in Public Finance. Oxford University Press.
6. H L Bhatia. Public Finance. Vikas Publishing House Pvt. Ltd.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach

- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Relationship between the Course Outcomes (COs) and Program Outcomes (POs):

Mapping between COs and POs		
	Course Outcomes (Cos)	**Mapped Program Outcomes**
CO1.	**Identify** and analyse government budgets, debt, public expenditures	**PO1, PO2, PO4**
CO2.	**Understand** various theories of tax incidence and various types of tax structure	**PO1, PO2, PO4, PO6**
CO3.	**Analyse** critically public goods and market failures	**PO1, PO2, PO6**
CO4.	**Analyse** public policy from the points of view of economic efficiency and equity.	**PO1, PO2, PO4, PO6**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO306	Public Economics	3	3	-	2	-	3	-	-

1=weakly mapped 2= moderately mapped 3=strongly mapped

ADAMAS UNIVERSITY
PURSUE EXCELLENCE

Semester VII

ECO401	ADVANCED MICROECONOMICS	L	T	P	C
Version 1.0	Contact Hours - 60	3	1	0	4
Pre-requisites/Exposure	Any Undergraduate degree (in 10+2+3 structure) with Economics in UG level				
Co-requisites	--				

Course Objectives:

Microeconomics I is the application of microeconomic tools studies at UG level to advanced as well as interdisciplinary areas. It aims to place the learner in the research industry or in academic profession. It is the basis of policy making as well as corporate decision making.

Course Outcomes:

On completion of this course, the students will be able to

CO1. **Discuss** the Elements, Tools & Methods of Microeconomics.
CO2. **Identify** the Fundamentals of Micro level transactions.
CO3. **Design** strategy to optimize objective functions.
CO4. **Choose** the Type and Role of market structure for creation of equilibrium price and output.

Course Content

Unit 1: Consumer Behaviour

Consumer's equilibrium: utility maximization and expenditure minimization, Marshallian and Hicksian demand functions, indirect utility function and expenditure function, Roy's identity and Shephard's lemma, duality and Slutsky equation, revealed preference: WARP and SARP

Unit 2: Theory of Firm

Production set, input requirement set, production function – Cobb-Douglas and CES functions, cost minimization and cost function, Shephard's lemma and input demand functions, duality between cost and production, long run cost function

Unit 3: General Equilibrium and Welfare Economics

(a) General equilibrium: 2X2 exchange economy with Edgeworth Box diagram, 2X2 model with production, competitive equilibrium

(b) Welfare economics: Pareto optimality in resource allocation and commodity distribution, Fundamental Theorems in Welfare Economics, role of market structure, externality and public goods

Pedagogy:

The faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Suggested Readings:

- Hal R. Varian. Microeconomic Analysis, W W Norton & Company, 3rd edition 2010.
- Mas-Colell, M. Whinston and J Green. *Microeconomic Theory*, Oxford University Press, 1995.
- Nicholson W. and Snyder C. (2017). Microeconomic Theory: Basic Principles and Extensions. Cengage. 12th Edition or latest.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Discuss** the Elements, Tools & Methods of Advanced Microeconomics.	**PO1, PO2, PO4,PO7, PO8**
CO2	**Identify** the Fundamentals of Micro level transactions.	**PO1, PO2, PO4,PO7, PO8**
CO3	**Design** strategy to optimize objective functions.	**PO1, PO2, PO4,PO7, PO8**
CO4	**Choose** the Type and Role of market structure for creation of equilibrium price and output.	**PO1, PO2, PO4,PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of advanced economic theories and adequately evaluate the issues related to economy, public policy, business and society	Problem Analysis and Critical thinking / Demonstrate an ability to construe data and information and critically examine the outcomes in relation to economic theories	Modern IT Tools / Efficiently adopt software (s) in conducting advanced analysis of economic data and other research oriented activities	Business and Society / Appraise the importance of economics as a discipline in context of business and society	Environment and sustainability / Draw inferences on concerns emerging from environmental changes as implied to society at large	Ethics / Hone ethical behavior and become sensitive towards the society	Leadership and Team work / Improve Leadership skills via developing strong emotional aptitude and become a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Research, Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO401	Advanced Microeconomics	3	3	–	2	–	–	1	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO402	ADVANCED MACROECONOMICS	L	T	P	C
Version 1.0	Contact Hours - 60	3	1	0	4
Pre-requisites/Exposure	UG level knowledge of Macroeconomics				
Co-requisites	--				

Course Objectives

The objective of the course is to interpret workings of open economy macroeconomics, advanced concepts like aggregate demand and aggregate supply, consumption behaviour, investment behaviour, macroeconomics of developing countries and overlapping generation model. The students should be able to understand the propositions of different schools of thought that dominate modern macroeconomics theory and develop mathematical models and rigorous analytical frameworks. The students should also be able to discuss the different macroeconomic tools used in policy making.

Course Outcomes

On completion of this course, the students will be able to

CO1. **Explain** different open economy macroeconomic variables.
CO2. **Develop** rigorous mathematical vigor in understanding theoretical models.
CO3. **Examine** macroeconomic tools used in policy making.
CO4. **Recognize** the workings of global macroeconomic institutions and their role in policy making.

Course Content

Unit 1: Open Economy Macroeconomics
Balance of payments, Exchange rate systems, Fixed vs. Flexible Exchange Rate; Perfect and Imperfect Capital Mobility; Mundell-Fleming model: Monetary and Fiscal Policy; Expectations and Exchange Rates, Monetary approach to Balance of Payments

Unit 2: Keynesian Aggregate Demand & Supply and new-classical economics

Keynesian aggregate and aggregate supply, Phillips curve, Adaptive and Rational Expectations, Policy evaluation and the Lucas critique, New classical analysis, basic concept of Real business cycles

Unit 3: Neo-Keynesian Macroeconomics
Neo-Keynesian models of price and wage rigidities –efficiency wage models- New Keynesian Theory of Money, Credit and Monetary Policy

Unit 4: Post-Keynesian theories
Kalecki's models of effective demand and monopoly markets, Structuralist models

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Peer Tutoring
- Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text Books

1 .Lectures on Macroeconomics. Blanchard and Fischer. Phi Learning; 1st edition (2009)
2. Advanced Macroeconomics. David Romer. Tata McGraw - Hill Education; 4th edition (2011)
3. Macroeconomics: Theories & Policies. R. Froyen. Pearson Education; 10th Edition (2013)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Explain** different open economy macroeconomic variables.	**PO1, PO2, PO3**
CO2	**Develop** rigorous mathematical vigor in understanding theoretical models.	**PO1, PO2, PO6, PO8**
CO3	**Examine** macroeconomic tools used in policy making.	**PO1, PO4 PO2, PO6, PO7, PO8**
CO4	**Recognize** the workings of global macroeconomic institutions and their role in policymaking.	**PO1, PO4 PO2, PO6, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of advanced economic theories and adequately evaluate the issues related to economy, public policy, business and society	Problem Analysis and Critical thinking / Demonstrate an ability to construe data and information and critically examine the outcomes in relation to economic theories	Modern IT Tools / Efficiently adopt software (s) in conducting advanced analysis of economic data and other research oriented activities	Business and Society / Appraise the importance of economics as a discipline in context of business and society	Environment and sustainability / Draw inferences on concerns emerging from environmental changes as implied to society at large	Ethics / Hone ethical behavior and become sensitive towards the society	Leadership and Team work / Improve Leadership skills via developing strong emotional aptitude and become a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Research, Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO402	Advanced Macroeconomics	3	3	1	1	-	3	3	3

1=weakly mapped 2= moderately mapped
3=strongly mapped

ECO403	TOPICS IN ECONOMETRICS	L	T	P	C
Version 1.0	Contact Hours - 60	3	1	0	4
Pre-requisites/Exposure	Basic Knowledge of Mathematics at 10+2 level				
Co-requisites	--				

Course objectives:

Econometrics is concerned with the application of statistical theory to the analysis of economic data and the estimation of economic relationships. This course intends to expose students to the statistical techniques that economists use for estimating, testing, and forecasting economic relationships. This course covers both an introduction to econometric theory and methods, and a range of applications. The structure of the course makes it ideal for a policy analysis focus. The course attempts to reduce the gap between what is taught in statistics and econometrics text books and how empirical researchers think about and apply econometric methods.

Course Outcomes:

At the end of the course, the student will be able to:

CO1: **Understand** the application of statistical theories to the analysis of economic data and the estimation of economic relationships.

CO2: **Understand** the importance and fields of application of econometric methods.

CO3: **Develop** knowledge on multiple regression model and estimation techniques.

CO4: **Learn** when and how to apply a particular econometric model and what kind of limitations it might face.

Course Content

Unit 1:Statistics Prerequisites (5 Hours)

Data - Classification and presentation; Frequency distribution - Diagrammatic representation of frequency distribution; Measures of Central Tendency; Measures of Dispersion; Measures of Skewness& Kurtosis; Bivariate data: correlation, covariance.

Unit-2: Statistical Inference [7 Hours]

Idea of Inference- Point andinterval estimations and testing of hypothesis.
Point estimation: Requirement of a good estimator, notions of mean square error, unbiasedness, Interval Estimation: Methods of constructing confidence intervals,Tests of Significance -Null and alternative hypothesis, simple and composite hypothesis, critical region, Type I and type II error, level of significance, p-value, power.

Unit 3: Applications of Simple Linear Regression Analysis (7 Hours)

Applications of Classical Linear Regression Model (CLRM) to Demand theory and production theory- practical training

Unit 4: Multiple Linear Regression Analysis (8 Hours)

Definition of Multiple Linear Regression Model (MLRM); General Linear Model; BLUE properties of GLM estimation ; Measuring Goodness of Fit; Tests of significance of coefficients Applications with data from relevant theories

Unit 5: Heteroscedasticity, Autocorrelation, Multicollinearity (5 Hours)

Heteroscedasticity: Definition, Consequences, Detection, Remedial Measures. Autocorrelation: Definition, Consequences, Detection, Remedial Measures. Multicollinearity: Definition, Consequences, Detection, Remedial Measures. Application with data from relevant theories

Unit 6: Instrumental variables (IV) Estimation and Two Stage Least Square (5 Hours)

Motivation, Omitted variables in a simple regression model, IV estimation of the multiple regression model, Derivation of Two stage least Squares, IV solutions to Errors-in variables problems, Testing for Endogeneity and Testing Over identifying Restrictions. Applications with data from relevant theories

Unit 7: Simultaneous equation system (8 hours)

Simultaneous equation system- Structural and Reduced forms - problem of identification; ILS and 2 SLS methods of estimations- some appalications

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model

- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text:

T1. G. S. Maddala, Introduction to Econometrics., 2nd Edition, Macmillan, New York
T2. Gujarati, D., Basic Econometrics, Tata McGra-Hill, Delhi, 4th Edition
T3: Jeffrey M. Wooldridge, Introductory Econometrics: A Modern Approach, South-Western, Cengage Learning, 2013, 5th Edition.

Reference Books:

R1. B. H. Baltagi, Econometrics. Springer (india) Private Limited; 3rd edition (2013)
R2. William H. Greene. Econometric Analysis. Pearson India; 5th edition (2003)
R3. Sankar Kumar Bhaumik, Principles of Econometrics: A Modern Approach Using EViews. Oxford University Press India (2015)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the application of statistical theories to the analysis of economic data and the estimation of economic relationships.	**PO1, PO3, PO7**
CO2	**Understand** the importance and fields of application of econometric methods.	**PO1, PO2, PO3,PO4**

CO3	**Develop** knowledge on multiple regression model and estimation techniques	**PO2, PO3, PO4**
CO4	**Learn** when and how to apply a particular econometric model and what kind of limitations it might face.	**PO1, PO2, PO6, PO7**

		Domain specific knowledge and skills/ Acquire knowledge of advanced economic theories and adequately evaluate the issues related to economy,	Problem Analysis and Critical thinking / Demonstrate an ability to construe data and information and critically examine the outcomes in relation to economic theories	Modern IT Tools / Efficiently adopt software (s) in conducting advanced analysis of economic data and other research oriented activities	Business and Society / Appraise the importance of economics as a discipline in context of business and society	Environment and sustainability / Draw inferences on concerns emerging from environmental changes as implied to society at large	Ethics / Hone ethical behavior and become sensitive towards the society	Leadership and Team work / Improve Leadership skills via developing strong emotional aptitude and become a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Research, Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO403	Topics in Econometrics	3	3	3	-	-	1	1	-

1=weakly mapped,
2= moderately mapped, 3=strongly mapped

ECO404	RESEARCH METHODOLOGY	L	T	P	C
Version 1.0	Contact Hours - 60	3	1	0	4
Pre-requisites/Exposure	Basic Knowledge of Mathematics at 10+2 level				
Co-requisites	--				

Course objectives:

This course will introduce students to methods of quantitative as well as qualitative economic research using primary and secondary data source. The course will familiarize students with sampling techniques, questionnaire design, implementation of field-based studies, including randomized controlled trials. Students will be provided training for carrying out data analysis, including use of data sets such as the National Sample Survey, National Family Health Survey, and Indian Human Development Survey. Students will be expected to design and implement a small study during the course of the semester and will be evaluated on this. This course will help the students with research degree option to initiate a dissertation topic and do the preliminary work.

Course Outcomes:

At the end of the course, the student will be able to:

CO1: **Develop** an overview of the process of research and its application in business and academia.

CO2: **Assess** a real life issue and develop a research design accordingly.

CO3: **Learn** different data collection and survey methods.

CO4: **Understand** tools and techniques of quantitative research.

Course Content

Unit-1: Research Process **(7 Hrs)**

Introduction: Defining need for research, defining research problem, setting research question, different types of research, Research Method and Methodology;
Research Process: Research objective, Literature Review, Information Types and Data Sources, Sample Plan, Data Collection, Data Analysis, Research Report

Unit-2: Research Design **(8 Hrs)**

Sketching a research design, Variables, Research Hypothesis, Control Groups, Experimental and Non Experimental Hypothesis Testing Research; Different Research Design in Exploratory Research, Descriptive Research, Diagnostic Research, Causal Research; Experimental Design: Control Design, Completely Randomized Design, Randomized Block Design, L-S Design, and Factorial Design

Unit-3: Sample Survey and Data Collection (5 Hrs)
Population and Sample, Census Survey and Sample Survey, Sampling Error, Non-Sampling Error, Sampling Techniques: Non- Probability Sampling, Probability Sampling; Sampling Distribution;
Data Collection: Qualitative & Quantitative Data, Primary & Secondary Data, Measurement and Scaling, Measurement Tools, Scaling Techniques; Methods of Data Collection-Questionnaires, Surveys, Archives, Online Data Collection

Unit-4: Basics of Quantitative Research (10 Hrs)
Quantitative approach to data analysis; Estimation: Point Estimation, Interval Estimation, Sample size determination; Hypothesis Testing: Null and Alternative Hypothesis, Type-I and Type-II Errors, One tailed and Two tailed tests, Level of Significance, Critical Region, P-value Approach, Hypothesis testing for Mean, Proportion, Variance, Difference of two means, proportions, variances, Goodness of Fit; Analysis of Variance: One way ANOVA, Two way ANOVA.; Regression Analysis, Multivariate Techniques.

Unit 5: Methods of Qualitative Research (10 Hrs)
Qualitative Approach, Types of Data: Verbal Data, Textual Data, Visual Data and Data beyond Talk; Research Design: Case Studies, Comparative Studies, Retrospective Studies, Longitudinal Studies; Data Collection: Interviews, Focus Group, Narratives, Participant and Non-participant Observation, Ethnography, Film Studies, Photography, Case Studies, Life Histories, Action Research; Qualitative Data Analysis: Transcription, Coding, Grounded Theory, Thematic Analysis, Content Analysis, Conversation, Discourse, Genre and Hermeneutics. 20

Unit 6: Learning Academic Writing (5 Hrs)
Research Report: Layout of the research report, Reference Systems, Research Ethics, Plagiarism, Peer Review; Academic Writing: Writing for journal/book chapter/newspaper article/magazine, Research Proposal writing, writing Abstract of any research, Research Grant Proposals.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction

- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text Books:

T1. Kothari, C.R., *Research Methodology: Methods and Techniques*, New Age International Publisher, New Delhi, (2004)
T2. Marczyk, G, Matteo, D. and Frstinger, D. *Essentials of Research Design and Methodology*, John Wiley and Sons. (2005)

Reference Books:

R1□□Kapalan, D. The Sage Handbook of Quantitative Methodology for the Social Sciences, Sage Publications, London, (2004)
R□□□Flick, U. An Introduction to Qualitative Research, Sage Publications, India, (2014)

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Develop** an overview of the process of research and its application in business and academia.	**PO1, PO2**
CO2	**Assess** a real life issue and develop a research design accordingly.	**PO1, PO2**

CO3	**Learn** different data collection and survey methods.	**PO1, PO2, PO6, PO7**
CO4	**Understand** tools and techniques of quantitative research.	**PO1, PO2, PO7**

		Domain specific knowledge and skills/ Acquire knowledge of advanced economic theories and adequately evaluate the issues related to economy, public policy, business and society	Problem Analysis and Critical thinking / Demonstrate an ability to construe data and information and critically examine the outcomes in relation to economic theories	Modern IT Tools / Efficiently adopt software (s) in conducting advanced analysis of economic data and other research oriented activities	Business and Society / Appraise the importance of economics as a discipline in context of business and society	Environment and sustainability / Draw inferences on concerns emerging from environmental changes as implied to society at large	Ethics / Hone ethical behavior and become sensitive towards the society	Leadership and Team work / Improve Leadership skills via developing strong emotional aptitude and become a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Research, Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO404	Research Methodology	3	3	-	-	-	1	2	-

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO405	Industrial Economics	L	T	P	C
Version 2.0	Contact Hours – 60	3	1	0	4
Pre-requisites/Exposure	Basic exposure of Microeconomics and Macroeconomics				

Course Objectives:

This course will provide a thorough understanding to the students regarding major developments in industrial reforms and its allied macroeconomic issues. This course will take the students through the various structure of firm, industry, market and its inter-linkage. Moreover, the significance of research and development and the importance of location will also be discussed.

Course Outcomes:

On completion of this course, the students will be able to

CO1. Identify the major developments in Industrial Economics and its allied issues.

CO2. Understand the linkage between market micro structure, managerial decision making, process of industrialization and policies.

CO3. Evaluate the significance of law in regulating behavior of the firms.

CO4. Analyse the type and nature of risk associated with industry and firm.

Course Content:

Unit 1: Theory of Firm **[20 lecture hours]**

Theory of the firm Size and structure of firms: the technological view of the firm; the transaction costs-property rights approach; investment specificity, incomplete contracts and vertical integration; empirical evidence. Separation of ownership and control: separation of ownership and control; foundations of the profit-maximisation hypothesis.

Unit 2: Firm conduct and market structure **[20 lecture hours]**

Short-run price competition: the Bertrand model; the Cournot model. Product differentiation and non-price competition: horizontal product differentiation; brand proliferation and entry deterrence; vertical product differentiation; markets with asymmetric information. Price discrimination: first-degree, second-degree and third-degree price discrimination; non-linear pricing; tie-in sales.

Unit 3: Research and Development in the process of Industrialization **[10 lecture hours]**

Research and Development and international patent laws; Product and process patent; Diffusion of technology;

Unit 4: Competition policy and regulation **[10 lecture hours]**

Competition and industrial policy: competition policy in the EU, India; current issues in competition policy; industrial policy towards R&D.

Regulation: regulation of firms with market power under symmetric information; regulation under asymmetric information; empirical evidence.

Core Text:

1. Industrial Organization: Issues and Perspective, Paul R Ferguson, Macmillan Education (1988)
2. Tirole, J. The Theory of Industrial Organization. (Cambridge, MA: MIT Press, 1998) first edition
3. Church, J.R. and R. Ware Industrial Organization: A Strategic Approach. (Irwin McGraw-Hill, 200) [ISBN 978-0071166454]

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Mapping between COs and POs		
	Course Outcomes (Cos)	**Mapped Program Outcomes**
CO1.	**Identify** the major developments in Industrial Economics and its allied issues.	**PO1, PO2, PO4**
CO2.	**Understand** the linkage between market micro structure, managerial decision making, process of industrialization and policies.	**PO1, PO2, PO4, PO6**
CO3.	**Evaluate** the significance of law in regulating behavior of the firms.	**PO1, PO2, PO6**
CO4.	**Analyse** the type and nature of risk associated with industry and firm.	**PO1, PO2, PO4, PO6**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO405	**Industrial Economics**	3	3	-	2	-	3	-	-

1=weakly mapped
2= moderately mapped
3=strongly mapped

Semester VIII

ECO406	TOPICS IN DEVELOPMENT ECONOMICS	L	T	P	C
	Contact Hours - 60	3	1	0	4
Pre-requisites/Exposure	Any Undergraduate degree (in 10+2+3 structure) with Economics in UG level				
Co-requisites	--				

Course Objective:

The course is specifically designed to help students learn and discuss some of the more involved questions for development of an underdeveloped economy. The students had already got an exposure to development problems in their undergraduate courses and at this level hey will be exposed more advanced theoretical and empirical analyses of dual economy, poverty, inequality and agrarian change.

Course Outcomes:

On completion of this course, the students will be able to:

CO1. **Develop** theoretical skills to understand the overall trajectory of evolution of modern economics.
CO2. **Understand** the contribution of major economists in the past to building modern economic analysis.
CO3. **Analyze** current economic situations and their solutions.
CO4. **Evaluate** the arguments of each school of economic thought.

Course Content:

Unit 1: Development and underdevelopment (10 hours)

Conceptions of Development- Characteristics of Development, Some historical explanations for differences in development indicators, Underdevelopment as a Coordination Failure, Features of underdevelopment, low rates of economic growth, structural unemployment,

Unit 2: The dual economy models (15 hours)

Dual Economy: The Lewis Model, Ranis-Fei model and their critiques, the concept of Surplus labour and disguised unemployment, Wage-productivity model, rural – urban migration and informal sector, Harris- Todaro model, Rural-urban wage gap: The labour turnover model

Unit 3: Tenancy and Credit **(10 hours)**

Agrarian institutions, stagnation in backward Agriculture, Tenancy: forms of agricultural land tenure, the role of agriculture in development, Credit markets: The lender's risk hypothesis, monopolistic markets, market fragmentation, credit policy

Unit 4: Macro characteristics of underdeveloped economics (12 hours)

Poverty: Conceptual issues, measurement, functional effects of poverty, vicious circle of poverty hypothesis
Inequality: measurement, Kuznets' inverted-U hypothesis- explanation, inequality and development inter-connections
Policy options on income inequality and poverty, conceptual issues about the relationship between growth and development - Human Development Index, its alternative forms and critique

Unit 5: Strategies of development **(8 hours)**

Stages of Economic growth: Rostow, Starting Economic development: Big push argument, balanced vs. unbalanced growth, Sustainable Development Goals (SDGs)- Concept

Pedagogy:

The faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text Books:

T1. KaushikBasu. Analytical Development Economics. New Delhi, Oxford India Paperback, 1998
T2. Debraj Ray. Development Economics. New Delhi: Oxford India Paperback, 1999

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and Pos		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	Develop theoretical skills to understand the overall trajectory of evolution of developing countries	**PO1, PO2, PO4**
CO2	Understand the contribution of major sectors in the development outcome of nations.	**PO1, PO2, PO4**
CO3	Analyze current problems in different sectors	**PO2, PO6, PO7, PO8**
CO4	Evaluate the arguments of various economists	**PO1, PO2, PO4, PO7**

		Understanding of basic knowledge in the different fields of business, commerce and economics in terms of concepts and principles.	Develop knowledge on fundamentals of micro and macro and its relationship with a country's economy	Acquire basic knowledge on application of mathematical and statistical tools in economics	Learn different theories of development economics and its contemporary issues in global context	Acquire knowledge on different areas of application of microeconomics and macroeconomics, eg. Economics of Health and Education, Resource Economics, Industrial	Develop problem solving skills through assigned practical projects in most of the courses.	Become employable in various private companies and government job at the end of	To foster thinking minds that are sensitive to societal needs & issues, thus ensuring a holistic development of the students
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO406	TOPICS IN DEVELOPMENT ECONOMICS	3	2	_	2	_	1	1	2

1=weakly mapped
2= moderately mapped 3=strongly mapped\

ECO407	LABOUR ECONOMICS	L	T	P	C
Version 1.0	Contact Hours - 40	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of Mathematics at 10+2 level				
Co-requisites	Knowledge of Microeconomics and Macroeconomics				

Course objectives

This course aims at introducingmajor theoretical models existing in labour economics and offer theoretical explanations of unemployment. It intends to build the skill of analyzing different concepts of labour market issues, such as unemployment, returns to education, wage gap, discrimination, etc. This course will help in developing the knowledge about the working of different trade unions and their impact on wages and employment. It will also help to develop the skill of critically analysis the research outcomes in the field of labour economics and connect them with the underlying assumptions of labour economics.

Course Outcomes:

At the end of the course, the student will be able to:

CO1.**Understand** the theoretical background of labour Economics with special focus on wage determination, unemployment and inequality.
CO2. **Understand** the concept of trade unions as one of the major labour market institutions and how they influence employment and wage determination.
CO3.**Analyse** the structure of labour market of a particular region and will be able to understand its frictions.
CO4. **Analyse**the impact of different macroeconomic forces on labourers, firms, and government.

Course Content:

Unit 1: Basic Theories of Labour Demand and Labour Supply (12 hours)

Derivation of labour demand in different market set up and wage and employment determination – perfect competitions, monopoly, monopsony; Keynes' contractual view of labour market – wage rigidity, minimum wage, policy effects; labour supply – a household's choice, income effects on labour supply

Application: Analysing the impact of pro-labour macroeconomic policies in India

Unit 2: Human Capital Theory (7 hours)

Introduction;the role of human capital in labour market participation; returns to different types of human capital

Applications: Returns to education in India

Unit 3: Labour Market Segmentation and Discrimination (7 hours)
Introduction; theories of segmented labour market and discrimination; differential labour market outcomes in terms of sector, gender and social groups

Applications: Gender wage gap and discrimination in India, caste and ethnicity based wage inequality and discrimination in India

Unit-4: Trade Unions and Bargaining (8 Hours)
Introduction; Monopoly Trade Union Model, Right to Manage Model; Efficiency Bargaining Model

Application: Impact of trade unions on wages in Indian manufacturing sector

Unit-5: Unemployment (6 Hours)
Introduction; minimum wages and unemployment; jobsearch Model; efficiency wage model

Application: Impact of unemployment insurance on unemployment

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model

- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

T1. Daniel S. Hamermesh, Labour Demand, Princeton University Press, 1996.
T2. . Cahuc, Pierre, and Andre Zylberberg. Labor Economics. Cambridge, Mass. and London: MIT Press, 2004.

Reference Books:

R1. Bhattacharjea, Aditya (2006), "labor Market Regulation and Industrial Performance in India:A Critical Review of the Empirical Evidence", The Indian Journal of labor Economics, 49(2):211-32

R2. Deakin Simon (2014), "Labour Law and Inclusive Development",Centre for Business Research, University of Cambridge ,Working Paper No. 458.

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the theoretical background of labour Economics with special focus on wage determination, unemployment and inequality.	**PO1, PO2, PO4, PO6, PO7, PO8**
CO2	**Understand** the concept of trade unions as one of the major labour market institutions and how they influence employment and wage determination.	**PO1, PO2, PO4, PO6, PO7, PO8**
CO3	**Analyse** the structure of labour market of a particular region and will be able to understand its frictions.	**PO1, PO2, PO4, PO6, PO7, PO8**

CO4	**Analyse** the impact of different macroeconomic forces on labourers, firms, and government.	**PO1, PO2, PO4, PO6, PO7, PO8**

		Understanding of basic knowledge in the different fields of business, commerce and economics in terms of concepts and principles.	Develop knowledge on fundamentals of micro and macro and its relationship with a country's economy	Acquire basic knowledge on application of mathematical and statistical tools in economics	Learn different theories of development economics and its contemporary issues in global context	Acquire knowledge on different areas of application of microeconomics and macroeconomics, eg. Economics of Health and Education, Resource Economics, Industrial	Develop problem solving skills through assigned practical projects in most of the courses.	Become employable in various private companies and government job at the end of	To foster thinking minds that are sensitive to societal needs & issues, thus ensuring a holistic development of the students
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO407	Labour Economics	3	2	_	2	_	1	1	2

1=weakly mapped
2= moderately mapped 3=strongly mapped\

ECO408	Introduction to Financial Markets operations and Instruments	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of finance				
Co-requisites	--				

Course Objectives:

1. To acquaint the students with the Equity Share and its valuation
2. To give an idea of various types of mutual fund products
3. To introduce the students to various derivatives products
4. To explain the student's various functions and operations of capital markets
5. To generate knowledge on trading and settlement mechanism

Course Outcomes:

On completion of this course, the students will be able to:

CO1: **develop** an idea about the Equity Share and its valuation
CO2: **generate** an idea on various types of mutual fund products
CO3: **have** an idea aboutthe various derivatives products
CO4: **develop** a detailed concept of various functions and operations of capital markets
CO5: **develop** basic knowledge about trading and settlement mechanism

Unit-1: Equity Markets (13 L)

Primary Market-Initial Public Offerings, Right issue and issue Management Process; Secondary Market-Recognised Stock Exchanges, Listing Norms; Stock Index-Major Indices, Composition, Selection criteria.

Unit-2: Mutual Funds (13 L)

Introduction to Mutual Funds and its Structure; Mutual Fund schemes and capital market instruments; Offer document, Distribution Channel and Marketing; Risk and Return in Mutual Fund schemes; How to do financial planning.

Unit-3: Derivatives Market (13 L)

Instruments: Forward, Futures and Options; Valuation: Cost of carry model, Black Scholes Model, Option Greeks; Equity Derivatives: Individual Stock Derivatives and Stock Index Derivatives.

Unit-4: Trading and Settlement

Trading intermediaries; trading mechanism; Clearing and Settlement; Security Analysis; Mock Trading Session-Live online terminal

Unit-5: Market Regulator and Investor Protection

Market Regulator: SEBI; Investor Protection

Text Books:

1. Prasanna Chandra, Investment Analysis and Portfolio Management, McGraw Hill Education

Reference Books:

2. Bodie, Kane, Marcus, Mohanty, Investment, McGraw Hill Education
3. AswathDamodaran, Investment Valuation, Wiley India Pvt. Ltd.
4. Hull, Introduction to Futures and Options Markets, Prentice Hall of India

Modes of Examination: Assignment/Quiz/Project/Presentation/Written Exam

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Relationship between the Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs)

Mapping between COs and POs/PSOs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO 1	**develop** an idea about the Equity Share and its valuation	**PO3, PSO2**
CO 2	**generate** an idea on various types of mutual fund products	**PO2, PSO2, PSO6**
CO 3	**have** an idea aboutthe various derivatives products	**PO2, PO3, PSO6**
CO 4	**develop** a detailed concept of various functions and operations of capital markets	**PO2, PSO2, PSO6**

CO 5	**develop** basic knowledge about trading and settlement mechanism	**PO3, PO4, PSO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO408	**Introduction to Financial Markets operations and Instruments**	3	3	3	3	2	2	1	1

ECO409	RESOURCE AND ENVIRONMENTAL ECONOMICS	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of Mathematics at 10+2 level				
Co-requisites	Knowledge of Microeconomics and Macroeconomics				

Course objectives

This course is designed to introduce under-graduate students to the economic issues around natural resources as well as environmental problems from the perspective of economics. Natural resources being scarce lead to core economic questions regarding the optimal rate of extraction. On the other hand, how discovery of new resource bases change the pricing and usage of one resource comes under the domain of resource economics. Designing economic instruments for regulation of environmental problems as well valuation of environmental services are major two focus of this course. In addition to that, some global environmental issues along with their macroeconomic policy impact will be addressed in this course.

Course Outcomes:

At the end of the course, the student will be able to:

CO1. **Understand** the Environment Economy relationship that forms the backdrop of many environmental problems from the perspective of economics.

CO2. **Analyse** how optimal rate of extraction change the pricing and usage of one resource comes under resource economics.

CO3. **Develop** insights abouthow discovery of new resources affecting pricing and usage of one resource comes under the domain of resource economics.

CO4. **Understand** environmental aspects of market failure

CO5. **Understand** the design and application of economic instruments for regulation of environmental problems and explain global environmental conventions.

Course Content:

Unit 1: Economics and Environment [10 lecture hours]

Introduction; Economics and Environment; Review of Microeconomics and Economic Welfare;Definition and role of Environmental Economics; Scope and Significance of

EnvironmentalEconomics; Relationship between the Environment and the Economic System; Environment as a Resource: Environmental Quality

Unit 2: Economics of Exhaustible Resources [10 lecture hours]

Intergenerational equity, Inter-temporal Dynamic Framework of Optimal Control, Market Structure of Non-renewable resources – perfect competition and monopoly, Examples of exhaustible resources

Unit 3: Economics of Renewable resources [7 lecture hours]

Renewable resources, Case study of Forestry: Single versus Multiple use Forest, Fishery: The concept of Maximum Sustainable Yield (MSY), Economic Decision regarding optimal rate of Extraction

Unit 4: Market Failure and Problem of Externality and Environmental Regulation [8 lecture hours]

Concept of Externalities and Public Bad; Concepts of Rivalry and Excludability; Environmental Pollution as a Public Bad; Externality (Pigou), Property Rights (Coase), Optimal Pollution; Pollution Control: Alternative Market Based Instruments – Pure policies (Emission Fees, Standard setting, and Tradable Pollution Permits), Hybrid instruments (two-part tariff)

Unit 5: Environmental Valuation [5 lecture hours]

Measuring values, benefits and costs – overview; total value – use and non-use values of goods; Total Economic Valuation; Valuation Methods: Stated Preference Approach, Revealed Preference Approach (intuitive discussion on different valuation methods)

Unit 6: Macroeconomic Purview of Environment [5 lecture hours]

Environment and Global Climate Change; Kiyoto Protocol and Issues around Carbon trading; Ecological Footprints; International Environmental Policies; Environmental Performance Index: choice of indicators; Environmental Performance Index: Comparison across Developing and Developed World.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis

- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Core Text

1. Hanley, Shogren & White (1997): *Environmental Economics*, McMillan.
2. Bhattacharyya, R.N. (2001): *Environmental Economics: Indian Perspective*, OUP
3. Charles Kolstad: *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010
4. Costanza, et. al. (1998): *An Introduction to Ecological Economics*.

Reference Books:

1. James, Mishra &Murty (1999) *Economics of Water Pollution: The Indian Experience*.OUP
2. Kadekodi , G. (2004): *Environmental Economics in Practice: Case Studies from India*, OUP
3. Environmental Performance Index, http://epi.yale.edu/ , Yale University;
4. United Nations Framework on Climate Change, http://newsroom.unfccc.int/
5. Kiyoto Protocol http://www.kyotoprotocol.com/

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping of COs and POs		
	Course Outcomes (COs)	**POs**
CO1	**Understand** the Environment Economy relationship that forms the backdrop of many environmental problems from the perspective of economics.	**PO1, PO2, PO4, PO5, PO6, PO7, PO8**
CO2	**Analyse** how optimal rate of extraction change the pricing and usage of one resource comes under resource economics	**PO1, PO2, PO4, PO5, PO6, PO7, PO8**
CO3	CO3. **Develop** insights abouthow discovery of new resources affecting pricing and usage of one resource comes under the domain of resource economics.	**PO1, PO2, PO4, PO5, PO6, PO7, PO8**
CO4	CO4. **Understand** environmental aspects of market failure	**PO1, PO2, PO4, PO5, PO6, PO7, PO8**
CO5	CO5. **Understand** the design and application of economic instruments for regulation of environmental problems and explain global environmental conventions.	**PO1, PO2, PO4, PO5, PO6, PO7, PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO409	Resource and Environmental Economics	3	2	_	2	3	1	1	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

ECO410	Behavioral Economics	L	T	P	C
	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Exposure to Microeconomics				
Co-requisites	NA				

Course Objective

To explain economic decision-making process and role of psychology in it and to elaborate the deviation in reality and standard economic theoretical predictions in the framework of behavioral economics

Course Outcomes

On completion of the course it is expected that students will be able to:

CO 1. Understand economic decision making and its applications.
CO 2 Analyse the framework of behavioural economics.
CO 3 Apply critical thinking skills to analyse behaviour.

Course Content

Unit I Introduction to Behavioral Economics 12 hrs

Origins of Behavioral Economics.

Neoclassical framework: choice under certainty, rational preferences, utility. Behavioral Framework: bounded rationality, opportunity cost, sunk cost, decoy effect, endowment effect, anchoring.

Judgement under risk and uncertainty: probability judgement, Bayes' Rule, gamblers fallacy, conjunction and disjunction fallacies, confirmation bias, overconfidence.

Unit II Choice Under Risk & Uncertainty 10 hrs

Choice under Uncertainty: Expected Value, Expected Utility, Risk Preference.

Decision under uncertainty: Framing effects. Bundling, Mental accounting, Allais Paradox, Ellseberg Paradox, Probability Weighting. Reference Dependence and Prospect Theory.

Unit III Intertemporal Choices 12 hrs

Discounted Utility Model: Interest rate, exponential discounting, rational delta.

Intertemporal Choice: hyperbolic discounting, misdirection. Preference Reversal, Regret Theory.

Unit IV Behavioral Game Theory 11 hrs

Basic introduction to analytical game: Nash equilibrium, pure and mixed strategy, learning from experience.

Behavioral Game theory: Social preference, altruism, envy, fairness, justice. Intension, reciprocity and trust. Limited strategic thinking.

Behavioral Welfare Economics: Libertarian Paternalism and Nudge.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text & References

● Erik Angner, “A Course in Behavioral Economics”, Palgrave Macmillan

● E. Cartwright, Behavioural Economics (2011), Routledge

● D. Kahneman, Thinking Fast and Slow (2011), Allen Lane, Penguin Books

● R H Thaler& C R Sunstein, Nudge (2021), Allen Lane, Penguin Books.

● D. Ariely, Predictably Irrational (2008), Harper, Harper Collins.

● D. Ariely, Dollars and Sense (2017), Harper, Harper Collins.

● M. Altman, Handbook of Contemporary Behavioural Economics: Foundation and Developments (2007), Prentice Hall India

● G. Loewenstein, Exotic Preferences: Behavioural Economics and Human Motivation (2007), Oxford University Press

● SanjitDhami, "The Foundations of Behavioral Economic Analysis", Oxford University Press (2016)

● Behavioral Economics: Toward a New Economics by Integration with Traditional Economics by Ogaki, Masao, Tanaka, Saori C. Published by Springer, ISBN 978-981-10-6439-5

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	Understand economic decision making and its applications.	**PO 2 and 6**
CO2	Analyse the framework of behavioural economics.	**PO 1**
CO3	Apply critical thinking skills to analyse behaviour.	**PO 4 , 5 and 7**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO410	Behavioral Economics	3	2		3	3	2	3	

ECO411	Political Economy of Development	L	T	P	C
	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure					
Co-requisites	NA				

Course Objective

This course introduces students to the emerging field of evolutionary political economy and provides theoretical insights into the evolution of complex economic systems that can explain regional change and adaptability. It gives an overview of alternative development paradigms, government policies, social movements, and interventions that have influenced modern economies and communities around the world. The course aims to provide students with an understanding of frontier research topics and a firm grasp of the tools available in the field. It examines important contributions in the fields of moral philosophy and welfare economics, as well as the relationship between political institutions and growth, to address some of the major deficiencies in contemporary economic theories. The course also evaluates existing economic models by comparing development experiences across countries.

On completion of the course, it is expected that students will be able to:

CO1. **Evaluate** different theoretical approaches and methodologies to better understand the social, economic, and political issues.
CO2Demonstrate empirical knowledge of various regions and socio-economic systems in different types of economy.
CO3Understand and critically analyze literature in evolutionary and institutional economics.
CO4 Recognize and **analyze** the moral dimensions of politics and economics.

Course Content

Unit I Evolution of Market Economy [8 hrs**]**

Evolution of money; Barter to Exchange; Types of Market and Economies.

Evolution of Economic Thought: Price system and the Invisible Hand; Classical Revolution and Classical Orthodoxy; Keynesian Revolution and Keynesian Orthodoxy; Neoclassical Synthesis, Post Keynesians; New Political Macroeconomics, Renaissance of Growth Theory.

Unit II Ethics, Morality and Rationality in Economics: Contemporary Scenario [8 hrs**]**

Adam Smith and Self Interest; Pareto Optimality: Efficiency, Welfarism; Well-Being, Agency and Utility; Rights and Freedom; Rationality, morality and ethics in economics; Three ethical frameworks.

Unit III Evolutionary Concepts in Economics for Conflict and Cooperation [10 hrs]

Concepts of Conflict and Cooperation.

Asymmetric information: Moral Hazard and Adverse Selection.

Tragedy of Commons: Three models; Prisoners Dilemma- Hardin Harder Game; Policy Prescriptions.

International relations and institutions.

Unit IV Epistemology of Development **[**12 hrs]

Enlightenment, colonialism and Orientalism; Classical Political Economy, Dualism; Capitalist Transition, Imperialism and Socialism.
Capitalism, Globalism and Neoliberalism; Global Capital, World of the Third; Dislocation and Displacement.
Debates and approaches to poverty reduction: Mainstream, Post-Developmentalist, Capability approach.
Race and Ethnicity, Class and Case- A brief idea.

Unit V Comparative Economic Systems **[7 hrs]**

Economic Systems; American Capitalism, European Experiment with Social Democracy, Scandinavian Capitalism and State Capitalism of Asian Nations.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

References:

1. Joseph Schumpeter: *Capitalism, Socialism and Democracy*, Routledge (2006).
2. Amartya Sen: *Inequality Reexamined*, Harvard University Press (1995).
3. Amartya Sen: *On Ethics and Economics*, Oxford University Press (2013).
4. Angus Deaton, *The Great Escape: Health, Wealth and the Origins of Inequality*, Princeton University Press (2015).
5. Daron Acemoglu and James A. Robinson: *Why Nations Fail: The Origins of Power, Prosperity and Poverty*, Crown Business (2013).
6. ElinorOstrom: *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press (1990)
7. AnuPartanen: *The Nordic Theory of Everything: In Search of a Better Life*, Harper Collins (2016).

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Programme Outcomes**
CO1	Demonstrate the understanding of main principles of economics as applied to commerce and business.	**PO1, PO2**
CO2	Apply economic reasoning to the analysis of questions pertaining to business immediately.	**PO1, PO4**
CO3	Demonstrate the ability to interpret data in view of economic theories and evidences.	**PO3**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO411	Political Economy of Development	3	3	3	3	2	2	1	1

1=weakly mapped 2 = Moderately mapped 3=strongly mapped

Minors to be offered

Semester I
Introduction to Microeconomics

ECO105	Introduction to Microeconomics	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of economics				
Co-requisites	--				

Course Objective:

Economic principles guide us to think like an economist. Business on the same side encounter a number of situation where this economic intuition and thinking may help to find viable solution and answers to the questions pertaining to a particular business problem. These problems may come from variety of contexts, for example, from micro operations of the business unit such as production and consumer demand or from macro environment such as a stee rise in overall price level in the economy. Therefore, in order to understand the reasons of such business problems and discover their solutions, a fundamental knowledge of economic principles is required. This course intends to give a glimpse of core principles of economics (micro principles, macro principles and some basic ideas of international economics) such as main problems of an economic system, fundamentals of demand and supply, consumer and producer surplus, concepts related national income etc. to the students. The course will be taught by lectures on core concepts supplemented with numerical analysis, case studies and small projects presentations by students.

Course Outcomes:

On completion of the course it is expected that students will be able to:
CO 1 Demonstrate the understanding of main principles of economics as applied to commerce and business.
CO 2 Apply economic reasoning to the analysis of questions pertaining to business immediately.
CO 3 Demonstrate the ability to interpret data in view of economic theories and evidences.

Course Content:

Supply and Demand: How Markets Work, Markets and Welfare
1. Elementary theory of demand: determinants of household demand, market demand, and shifts in the market demand curve
2. Elementary theory of supply: factors influencing supply, derivation of the supply curve, and shifts in the supply curve

3. The elementary theory of market price: determination of equilibrium price in a competitive market; the effect of shifts in demand and supply; the excess demand function: Existence, uniqueness, and stability of equilibrium; consumer surplus, producer surplus and efficiency of competitive markets (graphical approach); the idea of market failure; Elasticities and their applications.
4. Government intervention and their impact on market equilibrium and efficiency-: controls on prices (Price ceilings and price floors); indirect taxation

The Households
The consumption decision - budget constraint, consumption and income and price changes, demand for all other goods and price changes; description of preferences- most preferred bundle and its properties; consumer‘s optimum choice; income and substitution effects; Marshallian and compensated demand curves; Price consumption curve, income consumption curve, and Engelcurve;

The Firm and Perfect Market Structure
Defining a firm- firm’s legal forms; profit maximization hypothesis; Contractual theories and organizational theories of firms (concepts only); Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

Imperfect Market Structure
Monopoly and anti-trust policy; measuring monopoly power; government policies towards competition; various types of imperfect competition

Input Markets
Theory of rent-Ricardo, Marshall, and Modern theory of rent; Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves, competitive labour markets; labour market and public policy.

Suggested Readings
1. Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition,
2007.
2. 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.
3. Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
4. Samuelson and Nordhaus, Economics, McGraw Hill, 18th edition.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Programme Outcomes**
CO1	Demonstrate the understanding of main principles of economics as applied to commerce and business.	**PO1, PO2**
CO2	Apply economic reasoning to the analysis of questions pertaining to business immediately.	**PO1, PO4**
CO3	Demonstrate the ability to interpret data in view of economic theories and evidences.	**PO3**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behaviour and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO105	Introductory Microconomics	3	3	3	3				

1=weakly mapped 2= moderately mapped, 3 = strongly mapped

Semester II
Introduction to Macroeconomics

ECO106	Introduction to Macroeconomics	L	T	P	C
Version 1.0	Contact Hours: 60	3	1	0	4
Pre-requisites/Exposure	Basic knowledge of economics				
Co-requisites	--				

Course Objectives

This course aims to introduce the students to the basic concepts of macroeconomics. Macroeconomics deals with the aggregative aspects of the economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context.

Course Outcomes

On completion of this course, the students will be able to

CO1. Understand different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.
CO2. Understand the macroeconomic tools used in policy making mainly in a closed economy.
CO3. Develop insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.
CO4. Analyze the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy.

Course Content

Unit-I National Income Accounting and measurement 10 hrs.
Macroeconomic data- National Income accounting, three ways of measuring national income, fundamental relations between savings and investment, open economy and current account in national income accounting, price index and cost of living index

Unit-II Classical Economics 15 hrs.
Mercantilism as precursor of classical economics, classical labour market- concepts of labour demand and supply, automatic full employment and aggregate supply curve; The Quantity Theory of Money and aggregate demand curve, savings –investment equality and rate of interest

Unit-III The Keynesian system-I **15 hrs.**

The simple Keynesian model- Keynesian cross, equilibrium concept and derivation of multiplier, stability of equilibrium, simple multiplier in an open economy

Unit-IV The Keynesian system – II **20 hrs.**

The IS-LM model and simultaneous determination of rate of interest and income, concept of fiscal and monetary policy, money wage rigidity and unemployment in the economy, Aggregate demand and supply curve in Keynesian system

Core Text Books

1. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
2. N. Gregory Mankiw. Principles of Macroeconomics, Indian Imprint of South Western by Cengage India, 6th edition, 2015.

Reference Books

1. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
2. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

- Student Lecture and Presentation
- Case Study Analysis
- Teaching-learning Strategy using Multimedia
- Mind Mapping
- Chunking strategy
- Z to A Approach
- Collaborative and cooperative learning
- Anchored Instruction
- Peer Tutoring
- Microteaching and Simulated Teaching
- Blended learning
- Problem Based Learning (PBL)
- Rotation Model
- Flex Model
- Enriched Virtual Model

Modes of Examination: Assignment /Quiz / Project / Presentation / Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	**Understand** different macroeconomic variables like consumption, savings, investment, GDP, money, inflation, etc. and the propositions of different schools of thought that dominate macroeconomics.	**PO1, PO2, PO4**
CO2	**Understand** the macroeconomic tools used in policy making mainly in a closed economy.	**PO1, PO2, PO4**
CO3	**Develop** insights about the application of mathematical models used for the determination and measurement of aggregate macroeconomic variables.	**PO1, PO2, PO4,PO6, PO7, PO8**
CO4	**Analyze** the aggregate macroeconomic issues of price, output,and rate of interest mainly in the context of a closedeconomy	**PO1, PO2, PO4, PO6, PO7,PO8**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO106	Introduction to Macroeconomics	3	3	_	3	_	2	2	2

1=weakly mapped
2= moderately mapped
3=strongly mapped

Other minors to be offered in Semester III to Semester VIII have same syllabi as Core Courses

Multidisciplinary Courses

ECO107	Principles of Economics	L	T	P	C
Contact Hours	**60 hours**	**3**	**1**	**0**	**4**
Pre-requisites/Exposure	NA				
Co-requisites	None				

Course Objective:

Economic principles guide us to think like an economist. Business on the same side encounter a number of situation where this economic intuition and thinking may help to find viable solution and answers to the questions pertaining to a particular business problem. These problems may come from variety of contexts, for example, from micro operations of the business unit such as production and consumer demand or from macro environment such as a steep rise in overall price level in the economy. Therefore, in order to understand the reasons of such business problems and discover their solutions, a fundamental knowledge of economic principles is required. This course intends to give a glimpse of core principles of economics (micro principles, macro principles and some basic ideas of international economics) such as main problems of an economic system, fundamentals of demand and supply, consumer and producer surplus, concepts related national income etc. to the students. The course will be taught by lectures on core concepts supplemented with numerical analysis, case studies and small projects presentations by students.

Course Outcomes:

On completion of the course it is expected that students will be able to:
CO 1 Demonstrate the understanding of main principles of economics as applied to commerce and business.
CO 2 Apply economic reasoning to the analysis of questions pertaining to business immediately.
CO 3 Demonstrate the ability to interpret data in view of economic theories and evidences.

Course Content:

Unit I: Introduction to the Principles 9 hrs
How people make decisions: Trade-offs; the cost of something is what you give up to get it; rational people think at margins; people respond to incentives
How people interact: Trade can make everyone better off; Markets are good way to organise economic activity; government can sometimes improve market outcome

How economy as a whole works: a country's standard of living depends on its ability to produce goods and services; price rise when government prints too much money; Society face a short run trade-off between inflation and unemployment.
The economists as scientists: the scientific models; role of assumptions; economic models; a few basic economic models; micro and macro economics

Unit II: The Market forces of Demand and Supply 9 hrs
Market and competition
The demand curve: The relationship between price and quantity demanded
Market demand vs individual demand, Shifts in demand
The supply curve: relationship between price and quantity supplied
Market supply vs individual supply, Shifts in supply, Supply and demand together
Equilibrium, Three steps to analysing change in equilibrium

Unit III: Consumer, Producers and Efficiency of Markets 9 hrs
Consumer surplus
Willingness to pay; measuring consumer surplus
Producer surplus
Costs and willingness to sell: measuring producer surplus
Market efficiency

Unit IV: Behaviour of Economy as a Whole 9 hrs
The economy's income and expenditure
The measurement of GDP (Gross Domestic Product)
Defining GDP: Precautions to be taken
The components of GDP
Consumption
Investment
Government Purchases
Net Exports
Real vs Nominal GDP
The GDP deflator
Measuring cost of living: The CPI and WPI
GDP deflator vs Price index
Unemployment: Basic concepts

Unit V: Interdependence and Gains from Trade 9 hrs
A parable of Modern Economy: Globalisation of Economic Activity
Production possibilities

Specialisation and Gains
Comparative Advantage: Driving force of specialisation
Absolute Advantage
Opportunity cost and comparative advantage
Comparative advantage add trade

Pedagogy:

The Faculty may choose pedagogies suitable to the nature of course from following:

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Modes of Examination: Assignment/Quiz/Project/Presentation/ Course Work / Article reviews / Book Reviews / Reports / Written Exam / Jury / Survey / / any other method that suits to assess the given course outcome

Examination Scheme:

Components	Continuous Internal Assessment	End Term
Weightage (%)	**50**	**50**

Text and Reference:

Core Text:

Mankiw Gergory N (2007). "*Principles of Economics".* India edition, Cengage learning, New Delhi.

Reference Readings:

Frank Robert H and Bernanke Ben S (2007), "*Principles of Economics".* Third edition. Tata McGrawhill Publishing limited, New Delhi.

Samuelson Paul A and Nordhaus William D (2005). *"Economics"*. Eighteenth edition. Tata McGrawhill Publishing limited, New Delhi.

Joseph Nellis and David Parker (2006). "*Principles of Business Economics*" 2nd Edition, Pearson paperback edition.

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Programme Outcomes**
CO1	Demonstrate the understanding of main principles of economics as applied to commerce and business.	**PO1, PO2**
CO2	Apply economic reasoning to the analysis of questions pertaining to business immediately.	**PO1, PO4**
CO3	Demonstrate the ability to interpret data in view of economic theories and evidences.	**PO3**

		Domain specific knowledge and skills/ Acquire knowledge of core economic theories and adequately identify the issues related to economy, public policy and society	Problem Analysis and Critical thinking / Develop skills necessary to analyze economic data, think critically on alternatives and propose viable solutions	Modern IT Tools / Become proficient in using economic data analysis software (s) and conduct meaningful analysis of data	Business and Society / Appreciate the importance of responsibilities of businesses and government towards the society	Environment and sustainability / Contemplate on societal and global issues resulting from environmental concerns	Ethics / Appreciate individual ethical behavior and be able to discharge community responsibilities to the society	Leadership and Team work / Learn Leadership skills, Team work, and develop strong emotional and social aptitude to be a lifelong leaner.	Communication: Develop verbal and non-verbal communication skills for a successful career in Industry, Business and Entrepreneurship
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
ECO107	Principles of Economics	3	3	3	3				

1=weakly mapped
2= moderately mapped
3=strongly mapped


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