## DEPARTMENT OF ECONOMICS

## CHOICE BASED CREDIT SYSTEM (CBCS) OUTCOME BASED EDUCATION (OBE) SYLLABUS **M.A. ECONOMICS**

2023 - 2024

MADRAS CHRISTIAN COLLEGE (AUTONOMOUS) College with Potential for Excellence Affiliated to University of Madras Tambaram East, Chennai 600 059 MADRAS CHRISTIAN COLLEGE

#### MADRAS CHRISTIAN COLLEGE

#### VISION

Madras Christian College aspires to be an Institution of excellence transforming lives through education with a commitment to service.

#### MISSION

Madras Christian College (MCC) with the inspiration of the love of God offers to people of all communities education of the whole person, which is congruous with God's revelation in Christ of the true nature of humanity and is appropriate to the needs of India and of the world.

## Graduate Attributes

The Madras Christian College defines the philosophy underpinning its academic programmes and student life experience on campus through the Graduate Attributes (GA), that describe the knowledge, competencies, values and skills students imbibe for holistic development and contribution to society. These attributes encompass characteristics that are transferable beyond the domain of study into the national and international realm fostered through curricular, co-curricular and extra-curricular engagements.

## **GA 1: Intellectual Competencies**

- Graduates of MCC have a comprehensive and incisive understanding of their domain of study as well as the capability for cross-disciplinary learning.
- They have the ability to apply the knowledge acquired through the curriculum as well as selfdirected learning to a broad spectrum ranging from analytical thinking to synthesise new knowledge through research.
- Forming independent individual opinions regarding academic cores and socially relevant issues

## **GA 2: Professional Ethics**

- Graduates of MCC develop ethical and professional behaviour, which will be demonstrated in their chosen careers and constructive citizenship roles.
- They imbibe intellectual integrity and ethics in scholarly engagement and develop a spirit of inclusiveness through interactions with people of special needs and diversity.

## GA3: Leadership Qualities

- Graduates of MCC inculcate leadership qualities & attitudes, and team behaviour along democratic lines through curricular, co-curricular and extra-curricular activities
- They develop managerial and entrepreneurial skills to ideate and create new opportunities along with career readiness and capacity to take up various competitive exams.

## GA 4: Holistic Skill Development

- Graduates of MCC develop critical thinking, problem-solving, effective communication, emotional and social skills
- They develop digital competency to live, learn and serve in society.

## **GA 5: Cross-Cultural Competencies**

- Graduates of MCC imbibe cross-cultural competencies through engaging with diverse linguistic, ethnic and religious communities providing scope to understand, accept and appreciate individuals at local, national and international levels.
- They develop a global perspective through contemporary curriculum, culture, language and international exchange programmes

## GA 6: Service-Oriented Focus

- Graduates of MCC have sensitivity to social concerns and a conviction toward social justice through a commitment to active social engagement.
- They are endowed with a strong sense of environmental awareness through the curriculum and campus eco-system.

#### GA 7: Value-Based Spiritual Development

- Graduates of MCC are rooted in the principles of ethical responsibility and integrity permeated with Christian values leading to the building of character.
- They develop virtues such as love, courage, unity, brotherhood, industry and uprightness.

## **Programme Outcomes**

Programme Outcomes (POs) of Madras Christian College define the minimum level that students are expected to do, achieve and/or accomplish in order to graduate from a particular programme. These Outcomes are a framework to assess the nature of learning activity experienced within the programme.

#### POs for Postgraduate Programmes

## PG Programmes are designed to have the following outcomes:

#### Upon completion of a Postgraduate programme, the student will be able to

РО	РО	Description of PO	Mapped with GA
PO 1	Domain Knowledge	<ul> <li>Develop intensive and extensive knowledge and expertise in their respective domains</li> <li>Evaluate and create/construct domain specific knowledge in areas of learning, research and industry</li> <li>Formulate and extrapolate the knowledge gained to apply in real – life situations and competitive examinations</li> <li>Develop an aptitude for self-directed learning for excellence in their chosen area within the domain of study</li> </ul>	GA1, GA3, GA4
PO 2	Applicative knowledge and Lateral Thinking	Translate theoretical understanding to experimental knowledge and solve complex problems using Systems/Design Thinking Apply advanced knowledge and approaches to solve concrete and abstract problems in domain-related and multi-disciplinary issues. Able to solve problems using unconventional and creative Approaches	GA1, GA3, GA4

PO 3	Interdisciplinary knowledge Innovation and Research	<ul> <li>Develop aptitude for innovation and entrepreneurship</li> <li>Identify contemporary research problems, analyze data and propose solutions</li> </ul>	GA1, GA4, GA5, GA6
PO 4	Scientific Communication skills	<ul> <li>Document, prepare and present scientific work as reports and research articles in academic forums</li> <li>Critically assess, review and present theories, principles and concepts</li> </ul>	GA1, GA4, GA5, GA6
PO 5	Digital skills	<ul> <li>Use of domain-related advanced software resources, computational skills and digital tools for data analysis, visualization and interpretation</li> <li>Ethically apply digital skills to creatively communicate a wide range of ideas and issues related to academic experiences</li> </ul>	GA1, GA2, GA3, GA4

PO 6	Ethical practices	• Apply domain specific ethical principles and practices in academic, professional and social engagements	GA2, GA6, GA7
PO 7	Career readiness and higher education	<ul> <li>Choose from diverse career options available in local, national and international realms.</li> <li>Carry out further research or pursue higher education in the country or abroad</li> </ul>	GA1, GA2, GA5

## **PROGRAM SPECIFIC OUTCOMES (PSO's)\***

At the time of graduation, they would be able to:

PSO 1	Acquire analytical rigour in theoretical and empirical foundations of Economic theories.	PO: 1,2 & 4
PSO2	Analyse the working of the states and the Indian economy and the world economies and examine the interlinkages between them in today's globalized world.	PO: 2,3
PSO3	Apply the knowledge of Economic theory and quantitative tools in determining how economic agents (individuals, groups, governments and entire economies) strategically interact with one another to optimize micro and macro behaviour.	PO: 2,3, 4, 5 & 7
PSO4	Extend the application of Economic tools to other social sciences and issues of global sustainability, with specific reference to the environment and the society and propose practical innovative solutions/build innovative economic models.	PO: 4,5,6 & 7
PSO5	Nurture, develop strengthen relevant skill set for becoming industry-ready and hone critical analytical skills to look at issues of social and economic relevance.	PO: 3,4, 6 & 7

Semester	Part	Course code	Course title	Instructio n	Duratio n of		Marks	8	Credits
				hours per Cycle	exa m	ICA	ESE	Total	
Ι	Core		Advanced Microeconomic Theory	6	3 hours	50	50	100	5
Ι	Core		Mathematical Methods for Economics	6	3 hours	50	50	100	5
Ι	Core		Indian Economy	6	3 hours	50	50	100	4
Ι	Core		Growth Economics	6	3 hours	50	50	100	4
Ι	Elective		Elective 1-1 (or) Elective 1-2		3 hours	50	50	100	5
			Total	30					23
II	Core		Macro-Economic Theory and Analysis	6	3 hours	50	50	100	5
II	Core		Statistical Methods for Economics	6	3 hours	50	50	100	5
II	Core		Development Economics	6	3 hours	50	50	100	4
II	Core		Environmental Economics	5	3 hours	50	50	100	4
II	Elective		Elective 2-1 (or) Elective 2-2	5	3 hours	50	50	100	5
			Soft skills	2					4
			Internship						2
			Total	30					29
III	Core		Econometric Methods	6	3 hours	50	50	100	5
III	Core		Public Economics	6	3 hours	50	50	100	4
III	Core		Research Methods in Economics	6	3 hours	50	50	100	4
III	Core		Theory of Money and Finance	5	3 hours	50	50	100	4
III	Elective		Elective 3-1 (or) Elective 3- 2	5	3 hours	50	50	100	5
			Soft skills	2					4
			Total	30					26
IV	Core		Applied Econometrics	6	3 hours	50	50	100	4
IV	Core		International Trade and Finance	6	3 hours	50	50	100	4
IV	Core		Capital Markets and Investment Theories	6	3 hours	50	50	100	4

6

IV

Core

Dissertation

50

50

3 hours

100

5

Curriculum Template for M.A. Economics (Effective from 2023-2024)

IV	Elective	Elective 4-1 Or Elective 4-2	6	3 hours	50	50	100	5
		Total	30					22
		Grand Total	120					100
			(180)					

#### List of Elective Papers

Semester	Part	Cours	Course title	Instruction Dura		Marks			Credits
		e		Cycle	n or exa				
		code		Gyele	m		TOT	-	
						ICA	ESE	Tota 1	
I/II/III/I	Elective			6	3 hours	50	50	100	5
V									
τ /ττ /τττ /τ	Floative		Industrial Economics*	6	2 hours	50	50	100	5
1/11/11/1 V	Elecuve			0	5 nours	50	50	100	5
·									
I/II/III/I	Flective		Agricultural Economics*	6	3 hours	50	50	100	5
V	Liceuve			0	5 110013	50	50	100	5
	Flective		Game Theory*	6	3 hours	50	50	100	5
V	Liceuve			0	5 110013	50	50	100	5
			Theory of Industrial						
I /II /III /I	Floativo		Organization*	6	2 hours	50	50	100	5
V	Liecuve			0	5 nours	30	50	100	5
т /тт /ттт /т	El ationa		Operations Research	(	2 1	50	50	100	F
1/11/11/1 V	Elecuve			0	5 nours	50	50	100	5
· ·									
	<b>T1</b>		Labour Economics		2.1	50	50	100	-
1/11/111/1 V	Elective			6	3 hours	50	50	100	5
·			Economics of Gender						
T /TT /TTT /T	T-1		and Development		0.1	50	50	100	_
1/11/111/1 V	Elective		Selected topics in	6	3 hours	50	50	100	5
v			Cooperative Game						
x /xx /xxx /x			Theory		0.1	50	50	100	_
1/11/111/1 V	Elective			6	3 hours	50	50	100	5
v									
- / / /-			Health Economics				-		_
1/11/III/I V	Elective			6	3 hours	50	50	100	5
, v									
x /xx /*** /*			Economics of Insurance			50		100	
1/11/111/1 V	Elective			6	3 hours	50	50	100	5
v			Economics of Social						
			Sector						

- / / /-				. 1		-	100	-
1/11/111/1	Elective		6	3 hours	50	50	100	5
$\mathbf{V}$								
v								
		New Institutional						
		Economics						
I/II/III/I	Floctino		6	3 hours	50	50	100	5
1/11/111/1	Liecuve		0	J nours	50	50	100	5
V								
		Parianal Farmanian						
		Regional Economics						
I/II/III/I	Elective		6	3 hours	50	50	100	5
V								
v								
		Tamil Nadu Economy						
I/II/III/I	Elective	· · · · · ·	6	3 hours	50	50	100	5
1/11/11/1	Liceuve		0	5 110415	50	50	100	5
V								
		Complexity Economics						
T /TT /TTT /T	T1	Complexity Economies	1	0.1	50	50	100	-
1/11/111/1	Elective		6	3 hours	50	50	100	5
V		Computer Applications						
		in Economic						
		in reconomic						
		Analysis						
I/II/III/I	Elective		6	3 hours	50	50	100	5
V		Strategic Interactions and			1			
v								
		Evolution of Behaviour						
		in Networks.						

Curriculum Overview Table										
Part	Credits	Hours / Cycle								
I-CORE THEORY	5+5+4+4+5+5+4+4+	9+9+9+9+9+9+9+7.5+								
	5+4+4+4+4+4+5=70	9+9+9+7.5+9+9+9+9=141								
I-CORE PRACTICAL										
I-CORE ELECTIVE	5+5+5+5=20	7.5+7.5+9+9=33								
II-INTERNSHIP	2									
II-SOFT SKILL	4+4=8	3+3=6								
Total	100	180								

# **SEMESTER I**

#### ADVANCED MICROECONOMICS

Сот	urse Code										
С	redits	5									
Hou	urs / Cycle	6									
C	Category	Part I	Core	Theory							
S	emester	I									
Y	ear of	From the aca	ademic year 2023-2024	onwards							
Impl	ementati										
	on										
Cours	e Objectives	This course in analyze the beh provides micro	Micro Economics aims a navior of individual agents foundations for Macro E	at providing knowle s such as consumers Economics through §	edge to the st s, producers as general equilit	udents to f nd markets prium analy	ormally . It also sis.				
CO #		Course (	Dutcome(s)	PSO							
				Address	Bloom's T	Bloom's Taxonomy					
				L	evels (MI	10 15)					
On con	npleting the	course succe	ssfully, the student w	ill be able to							
CO 1	Describe pragmatic approach to demand analysis PSO 1 K1 and analyze preferences and utility in consumer behavior										
CO 2	Compare an long run cos	d Contrast be t analysis		K2							
CO 3	Identify un making	uncertainties in economic decision- PSO 3 K3									
<b>CO</b> 4	Analyze ol strategies of	igopoly mark players in the :	xet structures and market	PSO 2 PSO 3		K4					
CO 5	Appraise th macroecono optimality difficulties	ne micro eco mic general eco conditions a	nomic principles for puilibrium models using nd to identify the	PSO 3 PSO 5		K5					
			SYLLA	BUS							
UNIT			CONTENT		HOURS	COs	BLO TAX Y I	OOM'S ONOM LEVEL			
I	Theory of	f Consumer E	Behavior		20	<b>CO</b> 1	K1	to K5			
	A. A	pragmatic app	roach to Demand analy	rsis- Constant		to					
	ela	sticity demand	l function- Distributed	lag models-							
	No	Nerlove's and Houthakkar's and Taylor's Models- Linear									
	Ex	Expenditure system- Slutsky's Decomposition of Price									
	ett	tect.			_						
	$\mathbf{E} = \mathbf{E} = $										
	FU E-	nicuon - Indire	ction Relative reference	p sum principle -							
		spenditure run	cuon - relative prices a	nu Keal mcome -							
	fu	nction - Revea	led Preference and the	Substitution effect							
	I				1		I				

II	Theory of the Firm	15	<b>CO</b> 1	K1 to K5
	Returns to Scale and varying proportions - Duality in production -		to	
	Profit function - The Envelope Theorem - Profit Maximization and		CO 5	
	Input Demand - Cost Minimizing Input Choices Cost Functions -			
	Shepherd's Lemma and the Elasticity of Substitution - Short run and			
	long run distinction - Translog Cost function.			
II	Uncertainty	15	<b>CO</b> 1	K1 to K5
	Von Neumann - Morgenstern Utility - Risk Aversion - Mean -		to	
	Variance Utility - The demand for insurance - State dependent		<b>CO</b> 5	
	utility - Subjective probability theory - Asymmetry of Information			
	Moral Hazard and Principal Agent Problem			
	- Moral Hazard and Finicipal - Agent Froblem			
IV	Market Structure	15	<b>CO</b> 1	K1 to K5
	Cournot Equilibrium - Bertrand Equilibrium - Nash Equilibrium -		to	
	Multi-market Oligopoly Strategic Substitutes and Complements-		CO 5	
	Quantity Leadership - Price Leadership - Collusion Repeated			
	Oligopoly Games - Sequential Games - Limit Pricing.			
V	General Equilibrium and Welfare	15	CO 1	K1 to K5
	Price and Individual Welfare- Efficiency of the Competitive		to	
	outcome - Equilibrium in exchange - existence, uniqueness, stability		CO 5	
	of general equilibrium - Walrasian Equilibrium with contingent			
	commodities - Social Choice and Arrow's Theorem - Rawlsian Form			
	- The Utilitarian form Flexible forms.			
Textbo	poks			
1.	Varian. H. R.(1991). Micro Economic Analysis, Third Edition, Norton & ( Karl E Case, Rey C Esir and Sharon M Oster, "Bringiples of Economics" 10th	Co Publi	ishers.	
2. 3.	Koutsoviannis, A. Modern Micro Economics, Macmillan Publishers, New De	elhi – 201	1, Fiendee 1 12.	1411
Refere	nces			
1.	Jehle, G. A. and Reny, P. J. (2011). Advanced Micro Economic Theory, Pr	entice H	Iall.	1
2.	Nicholson, W. and Snyder, C. (2010). Intermediate Micro Economics & it	s applica	itions, Sou	th-western
Sugge	sted Beading			
1.	Nicholson, W. and Snyder, C. (2007). Micro Economic Theory Basic Prine	ciples &	Extension	s, Tenth Edition.
	South-western Cengage learning.	Ĩ		
2.	Gravelle, H. and Rees, R. (2004). Micro Economics. Third Edition. Prentic	ce Hall.		
Web R	Resources	r/modul	le-18/	
2.	https://felixmunozgarcia.files.wordpress.com/2018/02/chapter-5-choices	s-under-	uncertainty	v.pdf
3.	https://plato.stanford.edu/entries/arrows-theorem/			

	Course Articulation Matrix													
Outcomes				Programme	Outcom	es			Programme Specific Outcomes				Cognitive Level	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	3	-	-	-	3	1	-	-	3	-	-	-	-	K1
CO 2	3	-	-	-	3	-	-	-	-	-	3	-	-	K2
CO 3	3	-	-	-	3	-	-	-	-	-	3	-	-	K3
CO 4	3	-	-	-	3	-	-	-	-	2	2	-	-	K4
CO 5	3	-	-	-	-	-	-	-	-	-	2	-	2	K5
Wt. Avg.	3	-	-	-	3	1	-	-	3	2	2.5	-	2	
Overall Mapping of the Course PO – 2.33/ PSO – 2.37														

#### MATHEMATICAL METHODS FOR ECONOMICS

Cour	rse Code									
С	redits	5								
Hour	s / Cycle	6								
Ca	tegory	Part I	Part I   Core   Theory							
Sei	mester	Ι								
Y Imple:	ear of mentation	From the acade	emic year 2023-2024 on	wards						
Course	Objectives	The paper aims used in modern and dynamic eco	The paper aims to introduce students to the basic building blocks of mathematical analysis used in modern economic theory and equip them with tools to do optimization in both static and dynamic economic environments.							
CO #		Course Outco	ome(s)	PS( Addre	D ssed	Bloom's Taxonomy Levels (K1 to K5)				
On com	pleting the co	ourse successfully	, the student will be al	ole to	·					
CO 1	Recall the meconomic the	nathematical structer	ture of standard k	PSC	01	K1				
CO 2	Understand optimization theory	the mathematical problems appear	tools to solve in economic	PSC	) 2	K2				
CO 3	Solve mather process in an	matically the dyna	mics of the growth	PSC	) 6	К3				
CO 4	Examine a te Journal	echnical paper in a	ny standard economic	PSC	) 3	K4				
CO 5	Assess the dy an economy	namics of macroe	conomic policies in	PSC	) 4	K5				

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S
				TAXONOM
				<b>Y LEVEL</b>
Ι	Introduction to Analysis	18	<b>CO</b> 1	K1 to K5
	Sets - Basic concepts - Ordered sets - Relations-Order relations -		to	
	Metric Spaces-open and closed sets - Convergence: Completeness		CO5	
	and Compactness - Linear spaces - Affine sets - convex sets - Normed			
	Linear Spaces - convexity in Normed Linear space - Preference			
	Relations - Monotonicityand Non-satiation – continuity - convexity -			
	Functions-Functions as Mappings-Correspondences- Monotone			
	functions - Monotone correspondences - Continuous Functions -			
	Continuity of Correspondences - Continuous Maximum Theorem-			
	Fixed Point Theorem (Brouwer's version)			

II	Vector and Matrix Algebra Vectors and Vector Spaces: Linear Dependence and Independence	18	CO1 to	K1 to K5
	of Vectors -Vector Spaces and Subspaces - Basis of a Vector Space- Matrix Algebra - Trace, Rank and Inverse of a Matrix- Orthogonal matrix - Quadratic Form - Definition, Types and Properties - Linear		CO5	
	Equation: Consistency of Linear Equations - Solution of a System of Linear Equations (Homogenous and Non-homogenous) - Linear Transformations-Eigen Values and Eigen Vectors.			
III	Classical Optimization Techniques	18	<b>CO</b> 1	K1 to K5
	Unconstrained Optimization - Two and Three variables- Vector and	10	to	
	Matrix Differentiation - Jacobian and Hessian Matrices-Constrained		CO5	
	Optimization - Lagrangian Multiplier Technique - Applications -			
	Utility maximization, Profit maximization and Cost minimization.			
IV	Linear and Non-Linear Programming	18	CO1	K1 to K5
	Optimization with Inequality Constraints - Linear Programming -		to	
	Formulation-Primal and Dual- Graphical and Simplex methods -		CO5	
	Duality Theorem-Non-Linear Programming-Kuhn-Tucker			
	conditions - Economic Applications			
V	Economic Dynamics	18	CO1	K1 to K5
	Differential Equations-Basic Ideas-Types-Solution of		to	
	Differential Equations ( Homogenous and Exact)-Linear		CO5	
	Differential Equations with Constant Coefficients (First and			
	Second Order)- Applications- Solow's model-Harrod-Domar			
	Model-Applications to Market models- Difference Equations:			
	Types - Linear Difference Equations with Constant Coefficients			
	(First and Second order) and solutions-Applications- Samuelson's			
Textbook	Accelerator-Multiplier model-Cobweb model.			
1. C	arter. M., "Foundations of Mathematical Economics", MIT Press. 201	01.		
2 0	biang A $C$ and Wainwright K "Fundamental Methods of Mat	hematical		
2. C	conomics", McGraw - Hill Education, 2005.	inciniatical		
3. D	Dowling, E. T., "Mathematics for Economists", Schaum Series, 2010.			
4. G	Geoff Renshaw., "Mathematics for Economics", Fourth Edition, Os	xford Unive	ersity	
Р	ress, 2016.		5	
5. N	labbet AI "Workout Mathematics for Economists" Fourth Edit	tion Macm	illan	
N	laster Series London 1986			
Reference	8			
<b>1.</b> C	arter. Michael (2001). Foundations of Mathemat	ical Econo	omics.	MIT Press.
C	ambridge,Massachusetts,London		,	
2. O	k,E.A. Real Analysis with Economic Applications, Princeton Univers	ity Press		
3. Н	ummel, J. A. (1967). Introduction to Vector Functions, Addison-	Wesley Pul	olishing <b>(</b>	Company
4. Si	mon, C. P. and Blume, L. (1994). Mathematics for Economists,	W.W.N	orton a	nd
C	ompany			
5. St	rang, G. (2009). Introduction to Linear Algebra, Wellesley-Cambridge	e Press		
Suggested		· n·	т. 1	
1. H	oy et al. (2012). Mathematics for Economics, Prentice Hall India Lear	ning Privat	e Ltd	
$2. \ln 2$	atrilligator, M. (19/1). Mathematical Optimization and Economic The	ory, MIT Pi	ress	2
J. Si W/ch Dece	mon, C. P. and Blume, L. (1994). Mathematics for Economists,	W.W.Nort	on and	Jompany.
	unces	and J. '	····· /	
1. https	s://www.udemy.com/course/mathematics-for-economists-functions-	-and-deriva	uves/	
2. https	s://www.classcentral.com/course/swayam-mathematical-economics-	14187		
<b>3.</b> https	s://www.coursera.org/learn/introduction-to-calculus			

	Course Articulation Matrix														
Course Outcomes		Programme Outcomes									Programme Specific Outcomes				Constitue Land
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level
CO 1		3	3	-	2	1	2	1	-	3	-	-	-	-	K1
CO 2		2	1	1	1	1	-	-	-	-	-	-	-	3	K2
CO 3		3	2	3	3	1	1	2	-	-	-	-	-	3	K3
CO 4		1	3	2	-	2	2	2	-	-	-	3	-	-	K4
CO 5		-	-	-	1	3	3	3	-	-	-	-	2	-	K5
Wt. Avg.		2.25	2.25	3	3	1.6	2	2.5	-	3	-	3	2	3	
	Overall Mapping of the Course PSO – 2.67/ PO – 2.37														

#### INDIAN ECONOMY

Cou	arse Code											
(	Credits	4										
Hou	rs / Cycle	6										
C	ategory	Part I	Core		Theory							
Se	emester	Ι	Ι									
Ŋ	Year of	From the academic year 2023 – 2024 onwards										
Imple	ementation											
<b>Course Objectives</b> The purpose of this course is to develop in the students, a deep understanding of values of the economy so that they are able to comprehend and critically analyze the cullindian economic problems.												
CO #	O # Course Outcome(s) PSO Addressed (K2 to K6)											
On cor	On completing the course successfully, the student will be able to											
<b>CO</b> 1	Relate the kn implications	owledge on frame of the Indian ecor	ework and policy nomy	PS	SO 1	K1						
CO 2	Summarize the and focus on legislations in	ne problems facin few important br Indian agricultur	g the Indian agriculture eakthroughs and e.	PS	SO 2	К2						
CO 3	Identify the i system and fi	ssues and policies nancing infrastrue	in Indian financial cture development	PS	SO 3	К3						
CO 4	Examine ind period and th cottage indus	ustrial development the role and import stries in India.	nt during the plan ance of small scale and	PS	SO 4	K4						
CO 5	Appraise on Government	the achievements schemes	and failures of the	PS	SO 5	K5						

	SYLLABUS			
UNIT	CONTENT	HOURS	Cos	BLOOM'S
				TAXONOMY
				LEVEL
Ι	Framework of Indian Economy	18	<b>CO</b> 1	K1 to K5
	National Income – Trends and Structure of National		to	
	Income - Demographic Features - Indicators of		CO 5	
	Economic Growth and Development - Rural-Urban			
	Migration and issues related to Urbanization - Poverty			
	debate and Inequality, Nature - Policy and Implications			
	- Unemployment and its nature - Central and State			
	Governments' policies - Policy Implications -			
	Employment trends in the Organized and Unorganized			
	Sector.			
II	Development Strategies	18	<b>CO</b> 1	K1 to K5
	Agricultural- Pricing, Marketing and Financing of		to	
	Primary Sector - Economic Reforms- Rationale of		CO 5	
	Economic Reforms - Liberalization, Privatization and			
	Globalization of the Economy - Changing structure of			

	India's Foreign Trade - Role of Public Sector Redefining the role of Public Sector, Government Policy towards Public Sector, Problems associated with Privatization, Issues regarding Deregulation-			
	Disinvestment and future of Economic Reforms.			
III	The Economic Policy and Infrastructure	18	<b>CO</b> 1	K1 to K5
	Development		to	
	Energy and Transport - Social Infrastructure -		CO 5	
	Education, Health and Gender-related issues, Social			
	Inclusion - Issues and policies in Financing			
	Infrastructure Development - Indian Financial System-			
	Issues of Financial Inclusion - Financial Sector Reforms			
	- Review of Monetary Policy of RBI - Capital Market in			
	India.			
IV	The Economic Policy and Industrial Sector	18	CO 1	K1 to K5
	Industrial Sector in Pre-reforms period, Growth and		to	
	Pattern of Industrialization - Industrial Sector in Post-		CO 5	
	reform period - Growth and pattern of Micro, Small,			
	Medium Enterprises (MSMEs) - Problems of India's			
	Industrial Exports			
V	The Economic Planning and Govt. Schemes	18	CO 1	K1 to K5
	Structure and Functions of NITI Aayog – Goods and		to	
	Services Tax (GST) – Smart Cities Mission - Impact of		CO 5	
	Demonetization: Rural and urban areas - Sector wise			
	impact - Central Government Sponsored Schemes -			
	SSY - NCS - PMJDY – PMKVY – PMUY – DUGKY			
	– DIP – APY.			
Textbooks		_		
1. Dutt	. R. and Sundaram, K. P. M. (2015). Indian Economy, 62 <sup>nd</sup>	<sup>d</sup> Edition, Su	ıltan Chano	d & Sons, New
Delh	1.			
2. Agra	wal. M.K. and Agrawal A.N. (2015). Indian Economy: Pro	oblems of De	evelopmen	it and Planning,
New	Age International Publishers, New Delhi.			

3. Ahluwalia, I. J. and Little, I.M.D. (2012). India's Economic Reforms and Development, Oxford University Press, New Delhi.

#### References

- 1. Arvind Panagaria (2011). India: The Emerging Giant, 2<sup>nd</sup> Edition Oxford Univerty Press, New Delhi.
- 2. Bardhan, P.K. (1999). The Political Economy of Development in India, Oxford University Press, New Delhi.
- 3. Bawa, R.S. and Raikhy. P.S. (1997). Structural Changes in Indian Economy, Gurunanak Dev University Press, Amritsar.

#### Suggested Reading

- 1. Dhingra, I.C. (2006). The Indian Economy: Environment and Policy, S Chand & Sons, New Delhi.
- 2. Gupta,S.P.(1989). Planning and Development in India: A Critique. Allied Publishers, New Delhi.
- 3. Jalan, B. (2016). The Indian Economy: Problems and Prospects. Viking. New Delhi.
- 4. Brahmananda, P.R. and PanchmukhiV.A. (2001). 'Development Experience in Indian Economy, Inter-state Perspective,' Bookwell, New Delhi.

#### Web Resources

- 1. http://planningcommission.gov.in
- 2. http://civilaviation.nic.in http://mohfw.nic.in
- 3. http://rural.nic.in http://morth.nic.in http://shipping.gov.in
- 4. http://ssi.gov.in http://ssi.gov.in <u>http://commin.nic.in</u>

	Course Articulation Matrix													
Course	Programme Outcomes								Programm	ne Specifio	Cognitive	Level		
Outcomes	<sup>3</sup> PO1 PO2 PO3 PO4 PO5 PO6 PO7 PSO PSO2 PSO3 PSO4 PS							PSO5						
CO 1	2	2	3	1	2	1	2	2	3	2	2	2	K2	
CO 2	2	2	1	1	3	2	3	1	3	2	2	3	К3	
CO 3	2	2	2	2	2	2	2	2	2	2	3	2	K4	
CO 4	2	2	2	1	3	2	2	1	2	3	2	2	K5	
CO 5	2	2	2	2	2	2	2	2	3	2	2	3	K6	
Wt. Avg.	2	2	2	1.8	2.4	1.8	2.4	1.6	2.6	2.2	2.6	2.4		
Overall Mapping of the Course												PSO -2.28 / PO - 2.06		

#### **GROWTH ECONOMICS**

Cour	se Code										
C	redits	4									
Hour	s / Cycle	5									
Ca	tegory	Part I	Core		Theory						
Ser	mester	Ι									
Y	ear of	From the acade	emic year 2023-2024 on	wards							
Imple	mentation										
Course	Objectives	The course is ain the theoretical ar occupies a signif country, this sub	ned at acquainting the st ad empirical issues in eco ficant position in econo ject becomes extremely	udents w nomic g mic the relevant	vith the fur rowth and ory and for the st	indamental models used to analyze d development. Growth economics practice. India being a developing judents.					
CO #		Course Outco	ome(s)	P Add	SO ressed	Bloom's Taxonomy Levels					
On comp	pleting the co	urse successfully	, the student will be al	ole to							
<b>CO</b> 1	Understand they grow dif	how economies g ferently	row and examine why	PSO 1 PSO 4		K1					
CO 2	Explain eco growth, inclu	nomic growth in sive economic wel	terms of sustainable lfare etc	PSO 2 PSO 4 PSO 5		K2					
CO 3	Examine how in the analysi	v macroeconomic o s of growth of nat	concepts can be applied ions	PSO 1 PSO 3		К3					
CO 4	Explain throu economists l economic pro	igh the theories of have been able to oblems and crisis	economic growth how solve burning world	PSO 3 PSO 4 PSO 5		K4					
CO 5	Discuss the related facto economic gro	importance of rs in propelling owth	technology and other nations towards faster	PSO 2 PSO 4 PSO 5	2	K5/K6					

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	<b>BLOOM'S</b>
				TAXONOMY
				LEVEL
Ι	BASIC CONCEPTS IN GROWTH ECONOMICS:	10	<b>CO</b> 1	K1 to K6
	Factors affecting Economic Growth - Obstacles to		to	
	Economic Growth - Population Theories: Pessimistic		CO 5	
	Views on Population (Malthus and Ehrlich) – Optimistic			
	Views of Population (Simon, Kuznets and Esther			
	Boserup views) on Population Growth - Theory of			
	Demographic Transition – Traditional views of			
	Economic Growth on Capital accumulation – Division of			
	Labour – Specialization – Views of Adam Smith - Role of			
	Technological changeSimon Kuznets' Six characteristics			
	of modern economic growth – Nicholas Kaldor's stylized			
	facts about economic growth - Rostow's Stages of			
	Economic Growth			

II	<b>Exogeneous Growth Models:</b> Exogenous growth theories: The Harrod-Domar Growth Model – Neo- classical challenge to the Harrod-Domar conclusions - Robert Solow's Growth Model with and without Technological Change – Solow Model with Human Capital - Total Factor Productivity and Economic Growth	20	CO 1 to CO 5	K1 to K6
III	<b>Cambridge Challenge to Neo-Classical Models:</b> Cambridge Challenges to Neo-classical Approach – Kaldor's Differential Saving Approach – Pasinetti Model of Income Distribution – Joan Robinson's Golden Age Views on Economic Growth, different stages of Economic Growth — Kaldor-Kalecki views on Economic Growth.	17	CO 1 to CO 5	K1 to K6
IV	<b>Endogeneous Growth Models:</b> Nature of Technical Progress (Embodied and dis-embodied technical progress). Endogenous Growth Theories: The AK Model – Arrow's Learning by Doing Model – Schumpeterian Model of Economic Growth – Romer's Model of Economic Growth. Technical Progress.	18	CO 1 to CO 5	K1 to K6
V	<b>Empirics of Economic Growth:</b> Recent Stylized Facts on Economic Growth – Social Infrastructure and Long run economic performance – Natural Resources and the Environment on Economic Growth, R&D spillover and Productivity on Economic Growth – Engine of Economic Growth – Growth Miracles –Evidence and Impact of Globalization on interpretation of growth and welfare of nations.	10	CO 1 to CO 5	K1 to K6
Textboo1. Jones Comp2. Thirw3. Phillip	<b>ks</b> , C. I., Dietrich Vollrath, Introduction to Economic Growth pany. New York. val, A.P. (1999), (6th Edition), Growth and Development, M be Aghion and Peter Howitt (2008), The Economics of Gro	n. Third Editio Iacmillan, U.K wth, MIT Pre	on. W. W. K. ess.	Norton and
Reference1.BAmsterda2.GEdition), '3.CElsevier, A	res ehrman, S. and T.N. Srinivasan (1995), Handbook of Develo m. illis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992 W.W. Norton, New York. henery, H. and T.N. Srinivasan (Eds.) (1989), Handbook of Amsterdam	opment Econ 2), Economics Developmen	nomics, Vo s of Devel t Econom	ol. 3, Elsevier, opment, (3rd iics, Vols.1 & 2,
Suggeste 1. Brown Camb 2. Dasgu	ed <b>Reading</b> n, M. (1966), On the Theory and Measurement of Technical oridge, Mass. upta, P. (1993), An Enquiry into Well-being and Destitution	l Change, Car , Clarendon F	nbridgeU1 Press, Oxfo	niversity Press, ord.
Web Res 1. <u>https</u> 2. <u>https</u> 3. <u>https</u> <u>mirad</u> <u>disas</u> <u>20are</u>	ources ://www.nobelprize.org/prizes/economic-sciences/ ://www.ufjf.br/oliveira_junior/files/2009/06/rostov ://mru.org/courses/principles-economics-macroec cle-and- ter#:~:text=When%20a%20country%20grows%2C% 2%2C%20too.	<u>1971/kuzne</u> w.pdf onomics/ec 20its,%2C%	ts/lectur conomic- 20growtl	e/ growth- n%20disasters%

	Course Articulation Matrix													
Course Out	Programme Outcomes									Programm	ne Specifi	c Outcom	es	Cognitive Level
com es	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	3	2		-	1	1	2	-	3	-	-	2	-	K1
CO 2	-	3	2	2.5	-	2	2	-	-	2	-	3	2	K2
CO 3	2	2	3	-	-	-	-	-	3	-	3	-	-	K3
CO 4	2	3	1	-	1	-	3	-	-	-	2	1	3	K4
CO 5	1	-	2	2.5	1	-	3	-	-	3	-	2	1	K5/K6
Wt. Avg.	2	2.5	2	2.5	1	1.5	2.5	-	3	2.5	2.5	2	2	
	Overall Mapping of the Course PO - 2.4/ PO - 2													

## **Industrial Economics**

Cour	rse Code									
С	redits	5								
Hour	rs / Cycle	6								
Ca	tegory	Part I	Part I Elective Theory							
Sei	mester	Ι								
Y	ear of	From the acade	emic year 2023 – 2024 o	onwards						
Imple	mentation									
Course	Objectives	This course aims help students co course is also aim real-world issues student with a go reference to the	This course aims to provide an understanding of how theories from industrial economics can help students comprehend the behaviour of firms in imperfectly competitive markets. The course is also aimed at helping students with the theoretical tools that can be used to analyse real-world issues. The unit dedicated to industrial growth in India is designed to provide the student with a good understanding of industrial growth, prospects and problems with specific reference to the Indian industry.							
CO #		Course Outco	ome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)					
On comp	pleting the co	urse successfully	, the student will be al	ole to						
CO 1	Recall the ne Industrial sec	eed for the theore tor and the sector	tical framework of the al linkages	PSO 1, PSO 2	K1					
CO 2	Relate and in India.	tegrate theory with	the Industrial sector in	PSO 2, PSO 4	K2					
CO 3	Develop con study the beh	nceptual, analytica naviour of an Indu	l and logical skills to stry	PSO 3, PSO 5	K3					
CO 4	Discover an Industry	alternative meth	nodology to study an	PSO 4, PSO 3	K4					
CO 5	Appraise the explain and India	pricing and finar discuss the Indu	ncing of industries and strial Development in	PSO 5, PSO 2	K5/K6					

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
Ι	<b>Basics of Industrial Economics</b> Industrial categorization and pattern of production – Sole proprietorship and partnership – Joint Venture – Small Micro Enterprises – Micro Small Medium Enterprises- Large Scale Industries – Externalities – Capital-Output Ratio – Technological changes – Technical progress – Scale of Economies – Total Factor Productivity – Technology	15	CO 1 to CO 5	K1 to K6

II	Industrial Growth in India			
	Industrial growth in India – Trends and Prospects –			
	Efficiency – Productivity and Performance Constraints –			
	Industrial Sickness – Factors favouring Industrial			
	location – Industrial location policy in India –	15	<b>CO</b> 1	K1 to K6
	Liberalisation – Privatisation – Globalisation.		to	
			CO 5	
111	Strategic Behaviour of Firms			
	Market Structure - Seller's concentration; entry conditions -			
	Economies of scale, Market Structure and profitability,			
	Innovation; Theories of Industrial location – Weber and		CO 1	K1 to K6
	Sargent Florence; Factors affecting location		to	
	<i>Market Conduct</i> – Product Pricing - predatory pricing –		CO 5	
	planning Margara and Acquisitions and Diversification			
	plaining – Mergers and Acquisitions and Diversification	25		
	Market Performance - Growth of a firm; Behaviour of firm-			
	strategies - theories on firm behaviour and strategies			
	Cournot's model and Bertrand's model			
IV/	Barcoining Competition and Substitutes			
1 V	Multi-market oligopoly – Parker's five competitive forces			
	-Bargaining power of consumers - Bargaining power of			
	suppliers – Threat of new entrants – Threat of substitute			
	products – other variables – MNC Competing goods –	10	<b>CO</b> 1	K1 to K6
	The degree of Competition in the industry – Strategy		to	
	formation		CO 5	
V	Market Pricing			
v	Pricing methods and Pricing technology – Predatory			
	Pricing – Public Utility Services – Administered price by			
	public enterprises – Pricing in the private sector – Going			
	rate pricing – Mark up pricing – Market penetration	15	<b>CO</b> 1	K1 to K6
	pricing – Shadow prices - Significance		to	
	process of the process of surface of the process of		CO 5	
Textbo	oks	1/D) T 1 D	1 1' 1	
1.	R.R. Barathwal ., Industrial Economics New Age Internation	al (P) Ltd. P	ublishers	
2. 3	Stephen Marun: Advanced industrial Economics, Diackwell.	ماا		
J. Referen	Rausink Dasu. Ecclures in muusunai Organization meory, Diackw			
1	Mookheriee D (1997) Indian Industry: Policies and Performance	Oxford Univ	versity Press	Edited
2.	lean Tirole: The Theory of Industrial Organization. (MIT Press) Pr	rentice Hall Ir	ndia. Oz Sh	v: Industrial
	Organization, MIT Press			
3.	Bernadette Andreasso and David Jacobson (2005), Industrial Econ	omics and O	rganization	
Sugges	ted Readings			
1.	Richard Schmalensee and Robert D. Willig (Ed:), Hand Book of In	ndustrial Orga	nization, Ve	olume I and II, North
	Holland.			
2.	Donald A. Hay and Derek J. Morris: Industrial economics and orga	anization; the	ory and evic	lence, Oxford University
	Press			
Web R	esources			
1.	https://onlinelibrary.wiley.com/journal/14676451			
2.	https://www.jstor.org/journal/jinduecon			
3.	https://www.jindec.org/			

	Course Articulation Matrix														
Course	Programme Outcomes									Programme Specific Outcomes				Comitivo Loval	
Outcomes	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level
CO 1	2	2	-	-	-	-	-	-	-	2	2	-	-	-	K 1
CO 2	2	2	-	-	-	-	-	-	-	-	2	-	2	-	K 2
CO 3		2	-	-	-	-	I	2	-	-	-	3	-	3	K 3
CO 4	2	2.5	-	3	-	-	2	2	-	-	-	2	2	-	K 4
CO 5	2	2	-	2	2	2	-	2	-	-	2	-	-	2	K 5 /K 6
Wt. Avg.	2	2	-	2.5	2	2	2	2	-	2	2	2.5	2	2.5	-
	Overall Mapping of the Course PO – 2.07/ PSO – 2.20														

#### GAME THEORY

Course Code						
Credits	5					
Hours / Cycle	6					
Category	Part I	Elective	Theory			
Semester	Ι					
Year of	From the academic year 2023-24 onwards					
Implementation						
Course Objectives	<ol> <li>Provide modern</li> <li>Apply m</li> <li>Strength interdisc</li> </ol>	students with a rigoro economic theory. odels of strategic inte en the theoretical too iplinary settings.	us framework to analyse strategic foundations of ractions to real world economic problems box of students to approach problems of			

CO #	Course Outcome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)
On com	pleting the course successfully, the student will be al	ble to	
CO 1	Understand the theoretical tools needed to extend the domains of strategic modelling in economic theory.	PSO 1 & PSO 3	K1
CO 2	Analyse the game theoretic models in static and dynamic setting with complete and incomplete information.	PSO 1 & PSO 3	K2
CO 3	Apply game theory models to explain economic phenomena under uncertainty.	PSO 3& PSO 4	K3
CO 4	Evaluate the improvements in solution procedures beyond conventional Nash equilibrium.	PSO 3, PSO4 &PSO5	K4
CO 5	Develop evolutionary game theoretic models to economic problems connected to cooperation and coordination	PSO 3, PSO4 &PSO5	K5/K6

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S
				TAXONOMY
				LEVEL
Ι	Games with Complete Information			
	Games in Extensive Form with complete information			
	- Strategies - Backward induction - Threats, Promises	20	<b>CO</b> 1	K1 to K6
	and Commitments - Ultimatum game - Rosenthal's		to	
	centipede game – Continuous games – Stackelberg's		CO5	
	model of duopoly - Games in Normal form -			
	Dominated Strategies - Examples - Prisoner's			
	Dilemma, Global warming game, Second-price			
	auctions - Iterated elimination of Dominated Strategies			
	- Examples - Backward Induction and Iterated			
	elimination of strategies- Backward induction and			

	subgame perfect equilibrium– Rubinstein's bargaining model.			
Π	Nash Equilibria Definition of Nash Equilibria – Finding Nash Equilibria by Inspection – Cases of Prisoner's dilemma, Stag-Hunt game, Chicken Game, Battle of sexes and water pollution game – Finding Nash Equilibria by iterated Elimination of dominated strategies – Finding Nash equilibria using Best response – Cournot's Model of Duopoly.	10	CO1 to CO5	K1 to K6
III	Mixed Strategy Nash Equilibria Concept of mixed strategy- Mixed strategy profile- Mixed strategy Nash equilibrium – Nash's Existence Theorem (Without Proof) – Fundamental Theorem of Nash equilibria – Finding mixed strategy equilibria using Fundamental theorem of Nash equilibria – Other ways to find mixed strategy Nash equilibria - by differentiating payoff functions and using Best response correspondences- Examples of Two player Zero-sum games and Ultimatum mini game – Critique of Nash equilibrium.	15	CO1 to CO5	K1 to K6
IV	Static and Dynamic Games with Incomplete InformationStatic Games of incomplete information: Bayesian Games-Strategic representations of Bayesian games, Players, actions, information and preferences, Strategies and Bayesian Nash equilibrium- Examples Dynamic games of incomplete information: Sequential rationality with incomplete information, The problem with subgame perfection. Perfect Bayesian equilibrium – Signaling games: Separating equilibria and Pooling equilibria – Building reputation – Cooperation in a finitely repeated Prisoners' Dilemma – Information transmission and cheap talk	20	CO1 to CO5	K1 to K6
V	Alternatives to Nash Equilibrium Correlated equilibrium – Epistemic game theory – Evolutionary game theory: Evolutionary Stable Strategies (ESS) and evolutionary equilibrium, Evolutionary stability with two pure strategies-Stag Hunt, Hawk-Dove games, pure coordination game and Battle of sexes.	10	CO1 to CO5	K1 to K6

2. Tadelis, S. (2013) Game Theory: An Introduction, Princeton University Pres

#### References

2. Gibbons, Robert (1992) Game Theory for Applied Economists, Princeton University Press

<sup>1.</sup> Fudenberg, Drew and Jean Tirole (1991) Game Theory, MIT Press

3. Hargreaves, H.Shaun and Varoufakis, Yanis (2004) Game Theory: A Critical Text, Routledge

#### Suggested Reading

- 1. Schelling, Thomas C (1980) The Strategy of Conflict, Harvard University Press.
- 2. Axelrod, Robert (1984) The Evolution of Cooperation, Basic Books
- 3. Skyrms, Brian (2004) The Stag Hunt and the Evolution of Social Structure, Cambridge University Press Web Resources
  - 1. <u>https://ocw.mit.edu/courses/14-12-economic-applications-of-game-theory-fall-2012/</u>
  - 2. https://ocw.mit.edu/courses/15-025-game-theory-for-strategic-advantage-spring-2015/
  - 3. <u>http://www.gambit-project.org/</u>

	Course Articulation Matrix													
Course	Programme Outcomes								Pr	ogramme	Cognitive			
Outcomes	<b>PO</b> 1	PO 2	PO 3	<b>PO</b> 4	PO 5	PO 6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO 5	Level
CO 1	3	-	2	-	-	-	-	-	3	-	3	-	-	<b>K</b> 1
CO 2	3	-	2	-	-	-	-	-	3	-	3	-	-	K2
CO 3	3	3	2	-	2	-	2	-	-	-	3	3	-	К3
CO 4	3	3	2	1	2	-	2	-	-	-	3	3	3	<b>K</b> 4
CO 5	3	3	2	1	2	-	2	-	-	-	3	3	3	K5/K6
Wt. Avg.	3	3	2	1	2	-	2	-	3	-	3	3	3	
	<b>Overall Mapping of the Course</b> PO – 1.9 / PSO – 2.4													

# **SEMESTER II**

#### MACRO-ECONOMIC THEORY AND ANALYSIS

Co	urse Code								
(	Credits	5							
Hou	rs / Cycle	6							
C	ategory	Part I	Core	Theory					
Se	emester	II							
	Year of	From the aca	demic year 2023-2024 (	onwards					
Impl	ementation								
Course	e Objectives	This course or	n Macro-Economics inte	nds to make the	students understand the working				
		of the econom the role of exp prices interest	y as a whole, integrating bectations and informatic rates and exchange rate.	the different ma on in the estimati	rkets. It gives special emphasis on on of economic variables such as				
CO #		Course Out	come(s)	PSO	Bloom's Taxonomy Levels				
				Addressed	(K1 to K5)				
On com	pleting the co	urse successfu	illy, the student will be	able to					
<b>CO</b> 1	Describe the IS	S-LM-BP mode	ls and their implications	PSO 1	K1				
	for the mediur	n run and the	AS-AD model and the	PSO 4					
	Philips curve for	or the short run	1						
CO 2	Relate the con-	cept of rationa	l expectations, adaptive	PSO 1	K2				
	and mathema theories	atical expectat	tions with economic	PSO 3					
CO 3	Apply the conc	cept of opennes	ss in goods and financial	PSO 2	К3				
	markets and ex	change rate dy	namics	PSO 4					
				PSO 5					
<b>CO</b> 4	Compare differ	rent stabilizatio	n policies such as fiscal,	PSO 2	K4				
	monetary, inco	me and trade p	olicies	PSO 4					
				PSO 5					
CO 5	Explain and t	race business	cycle patterns from	PSO 2	K5				
	classical school	of thought to a	new classical and new	PSO 4					
	Keynesian scho	ool of thoughts		PSO 5					

	SYLLABUS										
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOM Y LEVEL							
Ι	Markets in the Short Run Goods Market, Financial Markets, IS-LM-BP Models - Medium Run - AS-AD Model Philips Curve, The Natural Rate of Unemployment - Long Run - Savings - Capital accumulation and output - Technological progress and Growth.	15	CO1 to CO5	K1 to K5							

II	Expectations	15	<b>CO</b> 1	K1 to K5
	Rational Expectations - Expectations and Financial markets -		to	
	Expectations and Consumption Investment - Expectation and output		CO5	
	and policy - Inter temporal view of consumption and investment -		005	
	Inflation expectations the DAD and SAS model.			

III	<b>Open Economy</b> Openness in goods and financial markets - Output interest rate and exchange rate - Exchange rate regimes - Exchange rate and the Balance of Payments.	15	CO1 to CO5	K1 to K5
IV	Stabilization Policies Stabilization Policies - Theory of policy - Tinbergen's approach - Fiscal Policy – Monetary Policy - Optional Policy Mix - Crowding out Effect - Bond Financial and Tax - Financed Government Expenditure - Mundell - Fleming model - Rules versus Discretion - Government debt and Budget Deficits.	20	CO1 to CO5	K1 to K5
V	Business Cycle Business Cycle Patterns - Sticky prices and sticky information - New perspectives on Booms and Recessions - New Keynesian Responses - New classical approach - Real Business Cycle Supply Shocks.	15	CO1 to CO5	K1 to K5

#### Textbooks

- 1. Carter, M., "Foundations of Mathematical Economics", MIT Press, 2001.
- 2. Chiang, A. C. and Wainwright, K., "Fundamental Methods of Mathematical Economics", McGraw Hill Education, 2005.
- 3. Dowling, E. T., "Mathematics for Economists", Schaum Series, 2010.
- 4. Geoff Renshaw., "Mathematics for Economics", Fourth Edition, Oxford University Press, 2016.
- 5. Mabbet, A.J., "Workout Mathematics for Economists", Fourth Edition, Macmillan Master Series, London, 1986.

#### References

- 1. Barro, Robert J. & Sala-i- Martin, Xavier (1995), Economic Growth, MacGrow Hill.
- 2. Blanchard, Olivier (2000), Macroeconomics, Prentice Hall.
- 3. Blanchard, Olivier and Stanley, Fischer (1989), "Lectures on Macroeconomics", The MIT Press.
- 4. Dornbusch, R., Fischer, S. and Startz, R. (2004), Macroeconomics, 9th Edition, MacGrow Hill.
- 5. Mankiw Gregory (2002), Macroeconomics, 5th Edition, Worth Publishers.

#### Suggested Reading

- 1. Romer, David (2003), Advanced Macroeconomics, 3rd Edition, Mc Grow Hill Publishers.
- 2. Snowdon, B. and Vane H, R, (2005) Modern Macroeconomics: Its Origin, Development and Current State, Edward Elgar Publishing Ltd.

#### Web Resources

- 1. https://warwick.ac.uk/study/summer-with-warwick/warwick-summer school/courses/macroeconomics/carlinsoskice\_ch13.pdf
- 2. https://www.econlib.org/library/Enc/PhillipsCurve.html
- 3. <u>https://www.economicsdiscussion.net/open-economy/aggregate-demand/mundell-fleming-model-meaning-and-main-message-with-diagram/15836</u>

Course Articulation Matrix															
Outcomes	Programme Outcomes							Programme Specific Outcomes					Cognitive Level		
	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	3	-	-	-	1	2	-	-	-	3	-	-	2	-	K1
CO 2	3	2	-	-	-	2	-	-	-	3	-	2	-	-	K2
CO 3	3	-	-	-	1	2	2	-	-	-	2	-	1	2	K3
CO 4	3	-	-	-	1	2	2	-	-	-	2	-	1	2	K4
CO 5	3	-	-	-	1	2	2	2	-	-	2	-	1	2	K5
Wt. Avg.	3	2	-	-	1	2	2	2	-	3	2	2	1.25	2	
$\begin{array}{ c c c } \hline Overall Mapping of the Course & PSO - 2 \ / \\ PO - 2.05 & \end{array}$															

#### STATISTICAL METHODS FOR ECONOMICS

Course Code											
Credits		5									
Hours / Cycle		6									
Ca	tegory	Part I	Core		Theory						
Semester		II									
Y	ear of	From the academic year 2023-2024 onwards									
Imple	mentation										
Course Objectives		The paper aims to introduce students to the basic building blocks of mathematical analysis used in modern economic theory and equip them with tools to do optimization in both static and dynamic economic environments.									
CO #		Course Outco	ome(s)	PS Addre	O essed	Bloom's Taxonomy Levels (K1 to K5)					
On completing the course successfully, the student will be able to											
CO 1	List the basic probability rules and understand theoretical distributions.				PSO 1 <b>K1</b>						
CO 2	Explain vario hypotheses	ous sampling meth	ods and testing of	PS	O 2	K2					
CO 3	Make use of t test and chi square for analysis				PSO 6 <b>K3</b>						
<b>CO</b> 4	Analyze the importance of ANOVA in Social Sciences				O 3	K4					
CO 5	Explain vario available tool	g process with the	PS	O 4	K5						

SYLLABUS									
UNIT	CONTENT	HOURS	COs	BLOOM'S					
				TAXONOM					
				Y LEVEL					
Ι	Probability Theory and Distributions	18	<b>CO</b> 1	K1 to K5					
	Concept of Probability-Conditional probability and Bayes'		to						
	Theorem-Random Variables-Discrete and Continuous-Density		CO5						
	and Distribution functions-Joint, marginal and conditional								
	distributionsMathematical Expectations with Theorems-Special								
	Distributions-Binomial, Poisson, Exponential, Normal and								
	Gamma Distributions- Markov Inequality-Chebyshev Inequality-								
	Law of Large numbers-Central Limit Theorem.								

II	Sampling Theory Population and Sample (Parameter and Statistic)- Sampling with and Without Replacement Random samples - Random numbers- Sampling Distributions-Sampling Distributions of means - Sampling distributions of proportions - Sampling distributions of differences and sums-Standard Error.	18	CO1 to CO5	K1 to K5					
III	Estimation Estimator and estimate-Point and interval estimation-Reliability of an estimate-Mean Squared Error-Properties of a good estimator- Cramer-Rao Lower Bound- Methods of estimation- Least Squares - Method of Moments - Maximum Likelihood-Neyman-Pearson Theory.	18	CO1 to CO5	K1 to K5					
IV	<b>Testing of Hypothesis</b> Null and Alternative Hypothesis-Type I and Type II Errors- Critical region- Level of significance-P value-One sided and two sided tests-Power of a test- Decision making-Small sample distributions-'t','F', $\chi^2$ Distributions – Applications – ANOVA- one way and two way classification-Goodness of fit.	18	CO1 to CO5	K1 to K5					
V	<b>Correlation and Regression</b> Simple - Partial and Multiple Correlation and Regression (Analysis of data and Interpretation)	18	CO1 to CO5	K1 to K5					
<ol> <li>Textbooks</li> <li>Sancheti, D.C. and Kapoor, V.K., "Statistics – Theory,Methods and Applications",Seventh Edition, Sultan Chand and Sons, New Delhi, 2010.</li> <li>Shukla, M.C. and Gulshan, S. S., "Statistics", Sultan Chand and Sons, New Delhi,2005.</li> <li>Veerarajan, T., "Probability, Statistics Random Processes", Tata McGraw Hill EducationPvt. Ltd., New Delhi, 2009.</li> <li>Vittal, P.R., "Mathematical Statistics", Margham Publications, 2020.</li> </ol>									
References         1. Agarwal, B.L., "Basic Statistics", Fifth       Edition, New Age International (P) Ltd., New Delhi, 2012.         2. Anderson, Sweeney and Williams., "Statistics for Business and Econom\ics", Cengage,									
3. A 3. A 4. C	<ol> <li>Arora, P. N., Sumeet Arora and Amit Arora, "Elements of Statistical Methods", S. Chand&amp; Company Ltd., New Delhi, 2009.</li> <li>Gupta, S.C., "Fundamentals of Statistics", Seventh Edition, Himalaya Publishing House, Mumbai, 2018.</li> </ol>								
<ul> <li>5. Gupta, S.P., "Elementary Statistical Methods", Eighteenth Edition, Sultan ChandandSons, New Delhi, 2014.</li> <li>Suggested Reading         <ol> <li>Cupta S.P. "Statistical Methods", Sultan Chand and Sona New Delhi, 2017.</li> </ol> </li> </ul>									
1.	Supra, 5.1., Statistical methods, Sultan Chand and Solis, New Delli,	<u>-001/.</u>							
- 2. Monga, G. S., "Mathematics and Statistics for Economics", Third Edition, Vikas Publishing House Pvt. Ltd., New Delhi, 2017.
- 3. Pillai R.S.N., and Bagavathi, V., "Statistics Theory and Practice", Seventh Edition, S.Chand & Co., New Delhi, 2017.

- 1. https://www.statista.com.
- 2. https://techjury.net
- 3. https://dss.princeton.edu/online\_help/analysis/interpreting\_regression.html

	Course Articulation Matrix															
Course		Programme Outcomes										Programme Specific Outcomes				
Outcomes		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level	
<b>CO</b> 1		3	3	-	2	3	2	1	-	3	-	-	-	-	K1	
CO 2		2	1	1	1	3	-	-	-	-	-	-	-	3	K2	
CO 3		3	2	1	3	3	1	2	-	-	-	-	-	3	K3	
CO 4		1	3	2	-	3	2	2	-	-	-	3	-	-	K4	
CO 5		-	-	3	1	3	3	3	-	-	3	-	2	-	K5	
Wt. Avg.		2.25	2.25	1.75	1.75	3	2	2	-	3	3	3	2	3		
	Overall Mapping of the Course PO – 2.14/ PSO – 2.67															

## **DEVELOPMENT ECONOMICS**

Cou	urse Code										
(	Credits	4									
Hou	rs / Cycle	6									
C	ategory	Part I	Core	Theory							
Se	emester	II		-							
Ŋ	lear of	From the academic year 2023 – 2024 onwards									
Imple	Implementation										
Course	<b>Course Objectives</b> Development economics occupies an important place in economic theory. The course is aimed at providing the students with the theories and models used to analyze the theoretical and empirical issues in economic growth and development.										
CO #		Course (	Dutcome(s)	PSO Addressed	Bloom's Taxonomy Levels (K2 to K6)						
On cor	npleting the o	course successfu	lly, the student will be able to								
<b>CO</b> 1	List the differ the open eco	rent stages of deve nomy	elopment and experiment with	PSO 2	K1						
CO 2	Explain econ categorize the	nomic models is e obstacles to econ	n the development process an nomic development	d PSO 3	K2						
CO 3	Plan the reson society	urce allocations an	d policy choices for welfare of th	e <b>PSO 4</b>	K3						
<b>CO</b> 4	Analyse the o to environme	environmental val ent analysis	ues with market-based approac	h <b>PSO 4</b>	K4						
CO 5	Estimate the knowledge of	international mor n national and inte	netary assistance and perceive the ernational financial system	e PSO 5	K5						

	SYLLABUS										
UNIT	CONTENT	HOURS	Cos	BLOOM'S							
				TAXONOM							
				Y LEVEL							
Ι	Introduction to Development Economics	18	CO 1	K1 to K5							
	Development perspectives - Development -		to								
	Inflation - Policy framework - Transition to an		CO 5								
	open economy - Stabilization and Economic										
	Reform in India - Poverty and Policy reforms -										
	The characteristics of underdevelopment and										
	structural change - Stages of development,										

	Industrialization and growth - Kaldor's growth			
	ideology – Classical – Neo-classical and			
	endogenous notion of growth and development.			
II	Economic Development Models	18	CO 1	K1 to K5
	Factors in the development process and obstacles		to	
	to development -Agriculture in economic		CO 5	
	development – Growth of the money economy –			
	Agriculture and industry interdependence – Rural			
	– Urban migration – Urban unemployment –			
	Capital in economic development – Technical			
	progress – Human capital and Investments in			
	Human capital – Education – Infrastructure –			
	Social obstacles to development – Dualism –			
	Regional inequalities – Prebisch model – Seer's			
	model – An Export growth model – Theories of			
	dependence and unequal change – Population and			
	Development – Enke's work and Simon's			
	challenge – Optimum population – Low level			
	equilibrium trap – Critical Minimum Effort Thesis.			
III	Resource Allocation and Policy Choices	18	CO 1	K1 to K5
	State - Allocation - Sustainable Development -		to	
	Choice of techniques – Resource allocation – Role		CO 5	
	of State – Market failures – Policy Models – Policy			
	choices - Balanced v/s Unbalanced growth -			
	Investment criteria - Social welfare function -			
	Project appraisal – Market prices and social values			
	- Shadow prices - Little-Mirrlees formulation -			
	UNIDO approaches to project appraisal.			
IV	Development and the Environment	18	<b>CO</b> 1	K1 to K5
	Development and the Environment - Market-		to	
	based approach to environment analysis –		005	
	Externalities – Renewable-non-renewable			
	resources – Measuring environmental values –			
	National Income Accounting – Sustainable			
	development – Natural capital and equity –			
	International agencies and the environmental			
	issues – Climate change.		00.1	774 . 777
V	Financing Economic Development		CO 1	K1 to K5
	Financing economic development – Financial	18	CO 5	
	systems and Development – Informal financial	10		

sector -Developments in Banking System -		
Development Bank and Micro-credit – Financial		
liberalization - Foreign Assistance Debt and		
Development – Dual-gap analysis and foreign		
borrowing - Types of International capital flows -		
International Debts and Debt servicing issues -		
International Monetary Assistance in the		
Development Process – Monetary and fiscal policy		
in context.		

Textbooks

- 1. Michael p. Todaro and Stephen C. Smith, Economic Development, Pearson Education, UK, 2020
- 2. Ray, D. (2009), Development Economics, Princeton University Press.
- 3. Thirlwall, A.P. (2006), Growth and Development, 8th edition, Palgrave Macmillan.

## References

- 1. Bardhan, P. and C. Udry (1999), Development Microeconomics, Oxford University Press.
- 2. Basu, K. (2003), Analytical Development Economics: The Less Developed Economy Revisited, The MIT Press.

## Suggested Reading

- 1. Taneja M.L. and Myer R.M. (2012), Economics of Development & Planning, 12th edition, Vishal Publishing Co, New Delhi.
- 2. Meier, G. (2001). The Old Generation of Development Economics and the New, In: G. Meier and J. Stiglitz (eds), Frontiers of Development Economics, World Bank.
- 3. Meier, G. and J. Rauch (2004), Leading Issues in Economic Development, 7th edition. Oxford University Press.

- 1. <u>https://hdr.undp.org/</u>
- 2. <u>https://sdgs.un.org/goals</u>
- 3. <u>https://www.fao.org/</u>

	Course Articulation Matrix												
Course			Pr	ogramm	e Outcom	es		Programme Specific Outcomes					Cognitive Level
Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	2	3	3	1	1	-	2	2	3	3	3	3	K1
CO 2	2	3	3	1	2	-	2	2	3	3	3	3	K2
CO 3	3	3	3	1	2	-	3	2	3	3	3	2	K3
CO 4	2	3	3	2	2	-	2	2	3	3	2	2	K4
CO 5	2	3	3	1	2	-	3	2	3	3	3	3	K5
Wt. Avg.	2.2	3	3	1.2	1.8	-	2.4	2	3	3	2.8	2.6	
	Overall Mapping of the Course PO – 2.30/ PSO – 2.68												

# **ENVIRONMENTAL ECONOMICS**

Cour	rse Code										
C	redits	4									
Hour	s / Cycle	5									
Ca	tegory	Part I	Core	The	eory						
Ser	mester	II									
Y	ear of	From the academic year 2023-2024 onwards									
Imple	mentation										
Course	Objectives	To be Listed in bullet points /Describe in 100 words The objective is to help students address environmental issues using economic tools and envision sustainable development ideas, environmental quality degradation and negative externalities owing to rapid industrialization and issues in hand. Climate change, deforestation, and unsustainable use of resources are issues that have been drawing attention to the development agenda. An understanding of the interactions between the environment and economics is essential to formulate strategies for sustainable development, and framing suitable policies to tackle environmental issues									
CO #		Course Outco	ome(s)	PSO Addresse	ed Bloom's Taxonomy Levels (K1 to K5)						
On comp	pleting the co	urse successfully	, the student will be al	ole to							
CO 1	Recall and environment externalities appreciate th economy	relate sustainabl quality degrae owing to rapid le interlinkages of	e development ideas, dation and negative industrialization, and f the environment and	PSO 1 PSO 3 PSO 4	<b>K</b> 1						
CO 2	Illustrate the and the varie its application	concept of sustain ous approaches to n in India.	able development goals the same concept and	PSO 2 PSO 4	K2						
CO 3	Apply variou natural res development	s theories underly ources and s	ing the judicious use of sustainable economic	PSO 1 PSO 3 PSO 4	K3						
CO 4	Analyze and biodiversity a Ecological Ec	elaborate on the and Resource Ec conomics discuss	concept and nature of onomics Theories and methods to solve issues	PSO 1 PSO 2 PSO 3 PSO 5	K4						
CO 5	Perceive, app various dim Environment	raise and discuss t eensions related t in the Developm	he linkages between the to health and the ent Process	PSO 2 PSO 4 PSO 5	K5/K6						

SYLLABUS									
UNIT	CONTENT	HOURS	Cos	BLOOM'S					
				TAXONOMY					
				LEVEL					
Ι	A Holistic Approach towards Sustainable								
	Economic Development: Environment and the								
	Economy.								
	Equillibrium Approach – Humankind needs and nature								
	relationship – Population size – Issues – Environment		<b>CO</b> 1	K1 to K5					
	problems – Technology – Production needs –		to	KI to KS					
	Consumption needs – Depletion of natural resources –	10	CO 5						
	Overexploitation of resources and scarcity – Issues of								
	pollution – Externalities and Market Failure.								
11	Understanding Linkages between Environment								
	and Economics								
	Material Balance Model – Law of Thermodynamics and		CO 1	TZ4 · TZF					
	Entropy – Welfare Economics – Efficiency and	20	to	KI to K5					
	Competitive markets – Environment as a public good	20	CO 5						
	and Externality – Pigou and Coase Theorem –								
	Comman Pool Resources – The Tragedy of Commons								
TTT	– Efficient Allocation of Resources – Opportunity Cost								
111	Envisioning ideas for Sustainable Development								
	Economic Resources and Sustainable Development –								
	Natural resources – Uses – Scarcity – Exploring								
	alternatives – Optimum Use Chiena – Environmental	20	$CO_1$						
	with the system of National Accounts Environment	20	to	K1 to K5					
	with the system of Ivational Accounts – Environment co. $4Impact$ Assessment (EIA) Sustainable		CO 5						
	development for Introgenerational and		005						
	Intergenerational Equity Measurement of SD								
	Strong and weak sustainability Strategies for								
	Sustainability EKC								
IV	Biodiversity and Economics of Environment								
1.6	Besource Economics and Ecological Economics								
	Resources _ Types Hotelling's Rule Solow		<b>CO</b> 1	K1 to K5					
	Hartwick's rule Optimality in Forest Harvesting		to	KI to K5					
	Taxes Subcidies Credits Cosse's theorem and	15	CO 5						
	Property rights Octrom's Collective Action	15							
V	Environment Linkages of Health Dimensions and								
v	Environment in the Development Process								
	Determinants of Health _ Appraise Environmental		CO 1						
	factors _ Outcomes _ Morbidity and Mortality		to	K1 to K5					
	Demand and Supply of Healthcare Human Capital	10	CO 5						
	versus Physical Capital – Environmental education for	10							
	Sustainable Development Clobal issues World								
	oustaniable Development – Global Issues – Wolld								

	Summits on Environmental issues and Sustainable										
	Development – SDG										
Textb	ooks										
1.	1. Charles Kolstad, Environmental Economics, New York Oxford University press (2000)										
2.	Natural Resource and Environmental Economics, Roger Pearman, Yue Ma, David Pearce										
3.	M. Karpagam, Environmental Economics: A Textbook, Sterling Publishers Pvt. Ltd, (2019)										
Refere	ences										
1.	1. R. N. Bhattacharya (2006), Environmental Economics: An Indian Perspective, Oxford University Press,										
	New Delhi.										
2.	Ulaganathan, Sankar (2006), Environmental Economics, Oxford University Press, New Delhi.										
3.	Hanley, Shogren and White (2004), Environmental Economics in Theory and Practice, McMillan India										
	Limited, Delhi.										
Sugge	ested Readings										
1.	Nick Hanley , Jason F. Shogren , Ben White , Environmental Economics: In Theory and										
	Practice Paperback – 10 November 2006										
2.	Singh & Shishodia (2010), Environmental Economics: Theory and Applications,										
	Sage Publications, New Delhi										
Web I	Resources										
1.	http://www.sciencemag.com/										
2.	https://seea.un.org/content/climate-change										
3.	https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-										
	resource-efficiency/green-economy										

	Course Articulation Matrix														
Course				Prog	ramme (	Outcome	es			Programme Specific Outcomes					Cognitive Level
Outcome s	PO1	PO2	PO3	-	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	2	-	-	-	-	-	-	-	-	2	-	2	2	-	K1
CO 2	2	2	-	-	-	2	2	2	-	-	2	-	2	-	K 2
CO 3	2	2	-	-	-	2	2	2	-	2	-	2	2	-	K 3
CO 4	2	3	2	-	2	-	2	2	-	2	2	2	-	2	K4
CO 5	2	3	2	-	-	2	2	2	-	-	2	-	2	2	K 5/K6
Wt. Avg.	2	2	2	-	2	2	2	2	-	2	2	2	2	2	
	PO - 2/														
	Overall Mapping of the Course $PSO - 2$														

# AGRICULTURAL ECONOMICS

Course Code							
Credits	5						
Hours/Cycle	5						
Category	Part I :ELECTIVE (Theory)						
Semester	II						
Year of Implementation 2023-2024							
Course Objectives	<ul> <li>i) To acquire the students with introductory Agricultural Economics and related</li> <li>ii) To focus on the Indian agricultural situation, natural, human, and capital resources, commodity product marketing,</li> <li>iii) To address the agricultural problems and policies. International issues and their impact on Indian agriculture</li> </ul>						

CO	Course Outcome (s)	PSO	Bloom's
		Addressed	Taxonomy
			Levels
			(K2 to K6)

On Completing the Course successfully, the students will be able to

CO1	Relate the role of Indian agriculture and study the		
	relevant theories and their applicability in real life	PSO 2 and	K1
	agricultural scenarios	PSO 4	
CO2	Explain the knowledge of agricultural markets and	PSO 1, PSO	K2
	behaviour and apply relevant theories	2, and PSO 3	
CO3	Apply economic tools to measure agricultural	PSO 2. PSO 3	K3
	Production and Productivity	and PSO 4	
CO4	Discover methods to strengthen skills to face the rapid	PSO2, PSO 3	K4
	changes in agricultural sector.	and PSO 4	
CO5	Assess the warehousing sources towards agriculture in	PSO 3, PSO 4	K5
	India.		

UNIT	CONTENT	HOURS	Cos	BLOOM'S TAXONOMY
				LEVEL
Ι	Agriculture and Economic Development	12	CO1	K1 to K5
	Nature and role of agriculture in economic		to	
	development - Farm Organisation - Agricultural		CO5	
	Production – Agri-based and Agro-based markets;			
	Inter-sectoral linkages of Agriculture - Efficiency			
	of irrigation and fertilizers on agricultural			
	production			

II	(a) Theories of Agricultural Development	18	CO1	K1 to K5
	Transformation of traditional agriculture -		to	
	Mellor's Theory of Agricultural Development,		CO5	
	Boserup's Theory of Agricultural Growth, Fei-			
	Ranis, Dale Jorgenson and Schultz Theory of			
	Transformation of Traditional Agriculture.			
	(b) Agricultural Production and Productivity			
	Agricultural production - Resource use and			
	efficiency, Production Function Analysis in			
	Agriculture, Factor combination and resource			
	substitution, Cost and supply curves, Size of the			
	farm and laws of returns - Farm budgeting and			
	cost concepts, Technical change labour			
	absorption.			
III	Agricultural Markets and Prices	15	CO1	K1 to K5
	Agricultural Markets and Marketing Efficiency -		to	
	Marketing functions and costs; Market Structure		CO5	
	and Imperfections - Regulated Markets; Marketed			
	and marketable surplus - Behaviour of			
	Agricultural Prices - Cobweb model; Price and			
	Income Stability - State Policy with respect to			
	agricultural marketing – Warehousing – Prices -			
	Taxation and crop insurance - Need for State			
	intervention - Objectives of Agricultural Price			
	Policy - Instruments and evaluation - Food			
	Security in India and Public Distribution System			
	(PDS) - Minimum Support Price; Role of farm			
	subsidies - Farmer suicides.			
IV	Agricultural Finance	15	CO1	K1 to K5
	Role of Capital and Rural Credit - Organized and		to	
	Unorganized Capital Market - Rural savings and		CO5	
	Capital formation - Characteristics and sources of			
	rural credit - Institutional and non-institutional;			
	Reorganization of rural credit - Cooperation in			
	India Cooperative movement, Problems and			
	prospects of Cooperative Institutions,			
	Commercial Banks, Regional Rural Banks - Role			
	of NABARD.			
V	Agriculture and External Sector	15	CO1	K1 to K5
	Sustainable Agriculture - Indigenous Practices;		to	
	Bio-technological practices and growth potential		CO5	
	Agri-technology start-ups -Genetically Modified			
	Crops (GMO) - Organic farming - Problems and			
	prospects of Indian Agriculture with specific			
	focus on Globalization of Indian Economy -			
	Issues in Liberalization of domestic and			

	international trade in agriculture - WTO and
	Agreement on Agriculture (AOA) - Impact of
	World Trade Organisation on Indian Agriculture.
Textb	ooks
1.	Reddy, S. (2008). Agricultural Economics. Oxford University Publication
2.	Singh, J., and Lekhi-Kalyani. R. K. (2016). Agricultural Economics. Kalyani Publishers.
3.	Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
Refere	ences
1.	Acharya and Agarwal (1987), Agricultural Marketing in India, Oxford & IBH Publishing Company.
2.	Agricultural Research Data Book (2009), Indian Agricultural Statistics Research Institute, Pusa, New
	Delhi 110 012
3.	Agricultural Statistics at a Glance (2010), Directorate of Economics and Statistics, Ministry of
	Agriculture, Government of India, New Delhi.
Sugge	ested Reading
1.	Kahlon, A.S. and Tyagi D.S. (1983), Agriculture Price Policy in India, Allied Publishers, New Delhi
2.	Rudra, A. (1982), Indian Agricultural Economics: Myths and Reality, Allied Publishers, New Delhi.
Web F	Resources
1.	https://agcensus.nic.in/
2.	https://eands.dacnet.nic.in/publications.htm
3.	https://prsindia.org/policy/analytical-reports/state-agriculture-
	india#:~:text=Despite%20high%20levels%20of%20production,%2Fhectare%20in%202014%2D15

	Course Articulation Matrix														
Course	Programme Outcomes 1									Progr	ramme	Specifi	ic Outc	omes	
Outcomes	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level
CO 1	2	-	2	-		-	2	2	-	-	2	-	2	-	K1
CO 2	2	2	2	-	-	-	-	-	-	2	2	2	-	-	K2
CO 3	2	3	2	-	-	-	2	2	-	-	2	2	2	-	K3
CO 4	2.	-	2,	-	2	2	2	2	-	-	-	2	2	2	K4
CO 5	-	2	2	-	-	-	-	-	-	-	2	2	-	-	K5
Wt. Avg.	2	2,25	2		2	2	2	2		2	2	2	2	2	
	PO-														
	Overall Mapping of the Course 2.07/														
													PSC	) – 2	

## STRATEGIC INTERACTIONS AND EVOLUTION OF BEHAVIOUR IN NETWORKS

Course Code			
Credits	5		
Hours / Cycle	5		
Category	Part I	Elective	Theory
Semester	II		
Year of	From the acade	emic year 2023-24 onwards	6
Implementation			
Course Objectives	<ol> <li>To equip s interaction</li> <li>To analyse population</li> <li>To apply th economic p</li> </ol>	tudents with formal tools to s and patterns created by the network properties of level. ne formal models of netwo problems.	to analyse networked nature of agent the process. interactions both at local level and at orks to gain insight and solve real world

CO #	Course Outcome(s)	PSO Addressed	Bloom's Taxonomy Levels
On com	pleting the course successfully, the student will be al	ole to	
<b>CO</b> 1	Understand about the mathematical structure of networks in various domains of knowledge	PSO 1 & PSO 3	K1
CO 2	Analyse the patterns created by network of agents' interactions in economics.	PSO 3	K2
CO 3	Apply formal theoretical tools to study socio- economic networks and diffusion in networks.	PSO 3 & PSO 4	К3
CO 4	Construct models of agent interactions to simulate the outcomes at local and aggregate levels.	PSO 3 &PSO 5	K4
CO 5	Recommend appropriate models and policy designs to solve real world economic issues.	PSO 3, PSO 4& PSO 5	K5/K6

	SYLLABUS			
UNIT	CONTENT	HOURS	Cos	BLOOM'S
				Y LEVEL
Ι	Fundamentals of Network Theory			
	Mathematics of Networks – Networks and Representation			
	– Nodes and Players – Graphs and Networks - Weighted	10	<b>CO</b> 1	K1 to K6
	networks - Directed networks - Hypergraphs - Bipartite		to	
	networks - Directed paths, walks and cycles - Tree, stars,		CO 5	
	circles, and complete networks - Degree of a network -			
	Centrality – Groups of nodes – Transitivity and clustering			
	coefficient – Homophily and assortative mixing.			
II	Structure of Networks			
	Degree of distribution - small world effect –Strong ties and			
	weak ties in social networks -The strength of weak ties- Six			
	degrees of separation- Preferential attachments - Degree of		<b>a a i</b>	
	distribution -Power law and scale free networks-	15	<b>CO</b> 1	K1 to K6
	Distribution of other centrality measures - Clustering		to	
	coefficients- Network Models – Random graph -Degree of		05	
	distribution and clustering coefficient -Path length -			
	configuration model – excess degree distribution – locally			
	tree like networks.			
111	Strategic Interactions in Networks			
	Modeling network traffic using game theory- Matching			
	market: Bipartite graphs and perfect matching – Valuation			
	and optimal assignment – Network Models of Market: A	15	<b>CO</b> 1	K1 to K6
	model of trade on networks – Equilibria in trading	15	to	KI to KO
	networks – Auctions and Ripple effects – Barganning and		CO 5	
	two person interaction: Nash bargaining. Illtimatum game			
	- Modeling network exchange: Stable outcomes			
IV	Network Dynamics			
	Information cascades: Herding experiment – A simple,			
	general cascade model – Network effects: Economy with			
	network effects -Stability, Instability and tipping points-			
	Power laws: Popularity as a network phenomenon-Rich get			
	richer models- The unpredictability of rich get richer			
	effects - Network dynamics in structural model: Diffusion			
	in networks - Modeling diffusion through a network -		00.4	174 . 174
	cascades and clusters - Diffusion, Threshold and the role	15	<b>CO</b> 1	K1 to K6
	of weak ties- Decentralized search: Modeling decentralized			
	search - Epidemics: SIR epidemic model and the SIS		0.05	
	epidemic model - Markets and information: Aggregate			
	beliefs and wisdom of crowds -Prediction markets and			
	stock markets - Asymmetric information and Quality			

	uncertainty online - Reputation systems and other mechanisms.			
V	<b>Coevolution and Networks</b> Coevolution of Coordination and networks: A model of coordination -Stable states – Cooperation in Dynamic networks: Cooperation and network effects- Learning in networks – The model – Individual strategies – reputation -network decisions – Convergence – Stable states in fixed networks – stable states in dynamic networks – Coevolution of conventions and networks: The model and the results.	15	CO 1 to CO 5	K1 to K6

#### Textbooks

- 1. Easley, David and Jon Kleinberg (2010) Networks, Crowds and Markets: Reasoning in a highly Connected World, Cambridge University Press
- 2. Newman, Mark (2018) Networks, Second edition, Oxford University Press.
- 3. Corten, Rense(2014) Computational Approaches to Studying the Coevolution of Networks and Behavior in Social Dilemmas, John Wiley & Sons, Ltd

### References

- 1. Jackson, Matthew, O (2008) Social and Economic Networks, Princeton University Press.
- 2. Degenne, Alain and Michel Forse (1999) Introducing Social Networks, Sage Publications
- 3. Centola, Damon (2018) How Behaviour Spreads : The Science of Complex Contagions, Princeton University Press

## Suggested Reading

- 1. Barabasi, Albert Laszlo (2002) Linked: The New Science of Networks, Perseus Books.
- 2. Jackson, Matthew,O (2019) The Human Network: How We're Connected and Why It Matters, Atlantic Books
- 3. Kucharski, Adam (2020) The Rules of Contagion: Why Things Spread and Why They Stop, Profile Books.

- 1. https://www.barabasilab.com/
- 2. <u>https://ccl.northwestern.edu/netlogo/</u>
- 3. <u>https://github.com/topics/contagion</u>

	Course Articulation Matrix													
Course Out	Programme Outcomes								Pr	ogramme	Specific	Outcom	es	Cognitive
com es	PO	PO 2	PO	PO	PO	PO (	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO 5	Level
CO 1	3	-	I	-	-	-	-	-	2	-	3	-	-	K 1
CO 2	3	-	3	-	-	-	-	-	2	-	3	-	-	K 2
CO 3	3	3	3		3	-	-	-	-	-	3	2	-	K 3
CO 4	3	3	3	1	3	-	3	-	-	-	3	-	3	K 4
CO 5	3	3	3	1	3	-	3	-	-	-	3	2	3	K 5/K 6
Wt. Avg.	3	3	3	1	3	-	3		2	-	3	2	3	
Overall Mapping of the Course PO – 2.66/ PSO – 2.50														

# **SEMESTER III**

## ECONOMETRIC METHODS

Cour	rse Code								
C	redits	5							
Hour	s / Cycle	6							
Ca	tegory	Part I	Core	Theory					
Ser	mester	III							
Y	ear of	From the acade	emic year 2023-2024 or	nwards					
Imple	mentation								
Course	Objectives	Econometrics is analysis of econ basic economet projects. This of econometrics ne	s concerned with the u comic data. The main ob- trics techniques which course is designed to ecessary to understand, e	se of statistical ojectives of the co will help and p provide students evaluate and inter	methods and procedures in the ourse are to introduce students to prepare them for their research s with sufficient knowledge of rpret econometric researches.				
CO #		Course Outco	ome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)				
On comp	pleting the co	urse successfully	, the student will be at	ole to					
CO 1	Recall the Econometric	basic structure a Model and estim	and components of an ate such models.	PSO1	K1				
CO 2	Understand Squares (OL	the importance S) Estimators in e	of Ordinary Least econometric analysis.	PSO2	K2				
CO 3	Apply the economic ag optimising b	knowledge of gents in their str ehaviour.	Econometrics to the ategic interaction and	PSO3	К3				
CO 4	<b>CO 4</b> Examine a Technical Research Paper in any standard <b>PSO3</b> economic journal.								
CO 5	Extend the a software and	pplication of econ build innovative	nometric models using econometric models.	PSO4	K5				

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S
				TAXONOMY
				LEVEL
Ι	Introduction	18	CO1 to	K1 to K5
			CO5	
	Econometrics – Definition – Scope, Methodology of			
	Econometric Analysis – Population Regression Function			
	– Stochastic PRF – Samples Regression Function –			

	Stochastic Form of SRF – Significance of Error Term U –			
	Classical Linear Regression Model - Assumptions – The			
	Mathad of Loost Causes			
	Method of Least Squares.			
II	Estimation	18	CO1	K1 to K5
		10	to CO5	
			0000	
	Estimation of Multiple Linear Regression Model - OLS			
	Estimators - Variance Covariance Matrix-			
	Gauss Markov Theorem - Testing Of Significance 'F' and			
	't' Test – Coefficient of Determination $R^2$ - Adjusted $R^2$			
	- Jarque-Bera Test			
	Jarque-Dera Test.			
III	.Extension and Multicollinearity	18	CO1 to	K1 to K5
			CO5	
	Double Log Model – Elasticity – Semi Log Model –			
	Growth Rate – Reciprocal Model – Testing Equality of			
	Two Pagrassion Coefficients – Postricted Least Squares			
	Two Regression Coefficients – Restricted Least Squares			
	– Prediction with Multiple Linear Regression – Choosing			
	Between Linear and Log Linear Models – Multi			
	Collinearity – Sources – Theoretical and Practical			
	Consequences – Detection – Frisch Confluence Analysis			
	– Farrar and Glauber Test – Remedial Measures.			
137		10		
1V	Heteroscedasticity and Auto correlation	18	CO1 to	KI to K5
	Heteroscedasticity – Sources – Consequences – Detection		CO5	
	– Graphical Test; Park Test; Glejser; Gold feld – Quandt			
	Test; Breusch Pagan Godfrey (BPG) Test and White's			
	General Heteroscedasticity Test – Remedial Measures –			
	When $\sigma^2$ ; is known - when $\sigma^2$ ; not known – White's			
	Robust Standard Errors Auto Correlation Sources			
	Consequences Detection Crembical Dur's Test			
	Consequences – Detection – Graphical, Kun's Test,			
	Durbin Watson 'd' Test; Breusch Godfrey (BG) Test –			
	Remedial Measures – When $\rho$ is known – When $\rho$ is not			
	known – Cochrane-Orcutt (C-O) Iterative Method.			
V	Simultaneous Equations Method	18	CO1 to	K1 to K5
	Definition – Structural Equations and Parameters –	-	CO5	
	Simultaneous Equation Bias Deduced Form Equations			
	and Denometers Identification Device for a for 1			
	and Parameters – Identification – Derivation of Order and			
	Rank Conditions – Test of Simultaneity – Hausman Test			
	– Test of Exogeneity – Indirect Least Square Method –			

Two Stage Least Square Method - Instrumental Variable		
Method – Three Stage Least Square Method.		

## **Textbooks:**

- Damodar N Gujarati & Sangeetha (2009), Basic Econometrics, Fifth edition, Tata McGraw Hill.
- Wooldridge J (2012): Introductory Econometrics: A Modern Approach, 5/E South Western.
- Green, William H., Econometric Analysis. Prentice Hall.

### **References:**

- Maddala G.S. (2002) Introduction to Econometrics, 3<sup>rd</sup> edition, John Wiley & Sons Ltd.
- Johnston J (2006): Econometrics Methods ,3<sup>rd</sup> Edition, McGraw Hill.
- Damodar N Gujarati, (2011) Econometrics By Example ,Ist edition , Palgrave Macmillan.
- Sankar Kumar Bhaumick (2015). Principles of Econometrics A Modern Approach Using E Views, 1<sup>st</sup> Edition, Oxford University Press.
- Nachane DM (2006): Econometrics Theoretical Foundations and Empirical Perspective, Oxford University Press.

### **Suggested Reading:**

- Neeraj R. Hatekar (2010) Principles of Econometrics An Introduction Using R. Ist Edition, Sage.
- Marno Verbeek (2012): A Guide To Modern Econometrics , 4<sup>th</sup>Edition, Wiley And Sons.
- Ramanathan R (2002): Introductory Econometrics with Applications 5<sup>th</sup> Edition. Thomson Asia Private Limited.

#### Web Resources:

<u>https://www.investopedia.com/terms/e/econometrics.asp</u> <u>https://study.com/academy/lesson/what-is-econometrics-definition-principles-models.html</u> <u>https://www.youtube.com/watch?v=M2AkZT8JrBA</u> <u>https://www.youtube.com/watch?v=DoBNfROpwFc</u>

	Course Articulation Matrix														
Course			I	rogram	me Outc	omes		Programme Specific Outcomes					Cognitive Level		
Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5		
CO 1	3	3		3					3						K1
CO 2		3	3							2					K2
CO 3		3	3	3	3		3				3				K3
CO 4				3	3	2	2				3				K4
CO 5				2	2	3	3					2			K5
Wt. Avg.	3	3	3	275	2.66	3	2.66	-	3	2	3	2			
Overall Mapping of the Course											ourse	2.9/2	.75		

## **PUBLIC ECONOMICS**

Cour	rse Code										
C	redits	4									
Hour	s / Cycle	6									
Ca	tegory	Part	Core	Theory							
Sei	mester	III									
Y	ear of	From the academic year 2023-24 onwards									
Imp	lementation										
Course	Objectives	This course inv why govern private sect issues relat goods, opti besides oth various im Commissio various leve	restigates the role of the public ment intervention is needed tor and the welfare influences ted to policy formulation and mal design of tax and social p ers. The course also details of balances concerned with the on in detailing the sharing of els of the Government.	sector in the econo , how it influences of such influences l execution such a policies, public exp n the concept of fis se same and the power and respon	omic arena, explaining the behaviour of the s. The course covers as provision of public benditure, public debt, acal federalism and the role of the Finance asibilities between the						
CO #		Course	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)							
On com	pleting the co	urse successfully	y, the student will be able to								
CO 1	Understand t the prov Samuelso	he key functions o ision of public g on, Musgrave, Buc	of public policy and market failu oods, evaluate the contribution hanan and Tiebout.	re in <b>PSO-1,</b> as of <b>PSO-2</b>	K2						
CO 2	Apply the the burden of analysis - shifting a and grow	neoretical underpi of taxation using - Understand and and the impact of th of the econom	innings of taxation and analyse the partial and general equilib analyse the theory of incidence the black economy on product y.	e the <b>PSO-1,</b> rium <b>PSO-2,</b> and <b>PSO-3</b> tivity	K3						
CO 3	Analyse the c growth a benefit incidence	oncept of public e nd reforms; apply analysis and ev analysis	ture, <b>PSO-1,</b> cost- <b>PSO-2,</b> nefit <b>PSO-3</b>	K4							
CO 4	Evaluate the if public the vario reforms i	various sources of debt is a burden o us types of debt n public debt mar	alyse <b>PSO-1,</b> tand <b>PSO-2,</b> e the <b>PSO-5</b>	K5							
CO 5	Analyse and conseque responsit the impac	evaluate the sy nt imbalances i bilities; understand ct of intergovernn	the <b>PSO-1,</b> and <b>PSO-2</b> and <b>PSO-5</b>	K6							

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONO MY LEVEL
Ι	Objectives – Allocation, Distribution and Stabilization – Public Choice – Evaluation of Public Finance Policy – Welfare Criteria and Market Failure – Impossibility of decentralized provision of public goods (contributions of Samuelson and Musgrave), Tiebout Model, Theory of Club Goods, Stabilization Policy: Uncertainty: Failure of inter- temporal markets social goals (removing distributional inequalities and regional imbalances) – Reforms in expenditure budgeting – Programme Budgeting and Zero-based budgeting – Balanced Budget Multiplier	15	CO1 TO CO5	K1 TO K6
II	<ul> <li>Introduction: Types of Taxes – The Excess Burden of Taxation – Partial Equilibrium Analysis – Welfare Cost of Taxation – General Equilibrium Analysis – The Welfare Cost of Income Taxes – Further considerations on other Direct and Indirect Taxes – Theory of Incidence and Shifting (Different Tax Cases) – Tax Evasion and Black Money – Theory of Optimal Taxation – VAT – GST.</li> </ul>	15	CO1 TO CO5	K1 TO K6
III	Wagner's Law – Components of Public Expenditure – Public Sector v/s Public Choice – Public Expenditure – Cost-Benefit Analysis and Externalities – Cost Benefit Analysis and Consumer Surplus.	15	CO1 TO CO5	K1 TO K6
IV	Internal debt in the Compensatory System – External Debt – Local Finance and National Finance – The Burden of Debt – Wasteful use foreign loans – Interests as social costs – Types of Debt Instruments – Ricardian Equivalence Theorem – Financing a Deficit – Brennen and Buchanan's Approach – Public Choice and Public Debt – A burden on future generations? – Fiscal deficit – Fiscal Responsibility and Budget Management Act (FRBM) – Fiscal Rules Consolidation – Issues in Public Debt – India's Public Debt Management Policy – Linkage between deficit finance, debt and growth.	15	CO1 TO CO5	К1 ТО К6
V	Fiscal Federalism – Inter Governmental Grants – Public Choice v/s Inter Governmental Grants – Public Choice v/s Fiscal Federalism –	15	CO1 TO	K1 TO K6

	Decentralization – Application of the theory of		CO5	
	Clubs. Virtual and horizontal imbalances			
	constitutional provisions - Finance Commission:			
	Devolution of resources and grants.			
Prescr	ibed Books/Textbooks			
1.	Musgrave R.A. and Musgrave F.B. (2004). Public Finance in	n Theory & I	Practice (2	2004)
2.	John G Cullis, Philip R Jones. Public Finance and Public Cl	hoice: Analy	tical Persp	vectives. 3rd ed.
	(2009).			
Refere	nces			
1.	Stiglitz J. and Rosengard J. (2015) Economics of the Public	Sector, 4 <sup>th</sup> e	dition, W	W. Norton and
	Company.			
2.	Atkinson, A. and Stiglitz. J. (1980). Lectures on Public Econ	nomics, McO	Graw-Hill	, reprinted by
	Princeton University Press (2015)			
3.	Readings in Public Finance - Amaresh Bagchi (2006), Oxfo	ord Universit	y Press, N	Jew Delhi.
4.	Indian Economy. 72nd Ed Gaurav Datt and Ashwani M	ahajan (2016	), S Chan	d Publishing;
	Seventy Second edition.		•	C C

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#### Suggested Reading

- 1. Hyman, D. (2014). Public Finance: A Contemporary Application of Theory to Policy (11th ed.). Cengage Learning (2014).
- 2. Indian Economy. Madhur M. Mahajan (2020), Pearson India Educational Services Pvt. Ltd.
- 3. The Indian Economy: Policies, Practices and Heresies. Jayanta Sarkar (2007), Pearson Longman.

- 1. <u>https://www.youtube.com/watch?reload=9&v=AhVR7gFMKNg</u>
- 2. <u>https://www.elibrary.imf.org/view/IMF069/22254-9781498330664/22254-9781498330664/ch02.xml?language=es&redirect=true</u>
- 3. <u>https://www.indianeconomy.net/splclassroom/what-is-deficit-financing-what-are-the-different-types-of-deficits-in-the-budget/</u>

	Course Articulation Matrix													
Course Out			Pro	gramme Out	tcomes		Р	rogramm	e Specific	Outcom	es			
com es	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level	
CO 1	2.7	2.7						2.7	2.5				K2	
CO 2	2.7	2.6			2.6			2.7	2.5	2.6			K3	
CO 3	2.7	2.6			2.6			2.7	2.5	2.7			K4	
CO 4	2.7	2.7	2.6	2.6	2.6		2.6	2.7	2.6			2.7	K5	
CO 5	2.7	2.7	2.6	2.6	2.6		2.6	2.7	2.6			2.7	K6	
Wt. Avg.	2.7	2.67	2.6	2.6	2.6	-	2.6	2.7	2.54	2.65		2.7		
Overall Mapping of the Course PO: 2.63 PSO: 2.65														

# **RESEARCH METHODS IN ECONOMICS**

Cour	rse Code										
С	redits	4									
Hour	rs / Cycle	6									
Ca	tegory	Part - I	Core		Theory						
Sei	mester	III									
Y	ear of	From the academic year 2023-2024 onwards									
Imple	mentation										
Course	Objectives	This course in research-oriente	This course in research methods deals with issues pertinent to research in economics such as review of literature, critical appraisal of ethical issues relating to research in economics; identifying and analyzing primary and secondary data sources; appraising and synthesizing the relevant literature, explaining how the theories have been tested; design a research project, carry out research involved and communicate findings. The coursework is practical in approach and is intended to help students in organizing their research-oriented activities.								
CO #		Course Outco	ome(s)	P Add	PSO ressed	Bloom's Taxonomy Levels (K1 to K5)					
On com	pleting the co	urse successfully	, the student will be al	ble to							
CO 1	Identify and related to car	Understand the trying out research	issues pertinent and h in economics	PSO PSO PSO	1 3 4	K2					
CO 2	Acquire kno research topi	wledge of the c c	oncept of selecting a	PSO PSO	2 4	К3					
CO 3	Analyze vario of available extant literat issues relatin	bus theories under literature and ob ture is done and ag to research in e	elying the judicious use serve how review of appreciate the ethical conomics.	PSO PSO PSO	1 3 4	К4					
CO 4	Identify and sources. El Understand l are commun	analyse primary aborate on the now theories are to icated	PSO PSO PSO PSO	1 2 3 5	К5						
CO 5	Perceive, Ap SPSS and ot	praise and Unc her statistical pack	lerstand the usage of kages in research.	PSO PSO PSO	2 4 5	К6					

	SYLLABUS			
UNIT	CONTENT	HOURS	Cos	BLOOM'S TAXONOMY LEVEL
Ι	Scientific Research Principles of Scientific Method – Basic elements and steps in scientific Research – Types of Research: applied and Action Research, Mixed Methods (Qualitative and Quantitative Studies), Development and Participatory Research.	10	CO 1 to CO 5	K1 to K6
II	Research Process and Methods of Research Identification, Selection and Formulation of a Research Problem – Review of Related Literature and summarizing – Sources and Criteria for selection – Preparation of Research Design and its components – Parametric and Non-Parametric Approach – Exploratory, Descriptive and Experimental Methods.	20	CO 1 to CO 5	K1 to K6
III	Tools of Data Collection Research Data – Primary and Secondary Sources - Data Collection Methods – Laboratory Randomness Experiment -Sampling and Sampling Designs – Sample Size: Sampling and Non Sampling Errors – Reliability of samples – Data collection tools – Scaling Techniques – Process of Data – Formulation of Hypotheses and Testing.	20	CO 1 to CO 5	K1 o K6
IV	Data Interpretation and Report Writing: Data Processing – Scoring, Categorization and Coding – Draw of inference and interpretation – Research Report – Basic components and Format of Research Report – Types of Research Reports – Research Findings - Presentation and Publication - Reference materials – Quotation - Bibliography - Footnotes – Glossary – Appendix	15	CO 1 to CO 5	K1 to K6
V	Application of SPSS to Economic ResearchBasic Statistical Analysis (Inferential Analysis) –Exploratory data analysis: Summary statistics –		CO 1 to CO 5	K1 to K6

Distribution Plots – Normality Plots with Tests – Compare Means - Means, The One-sample T Test, The Independent-samples T Test, The Paired- samples T Test - One- Way Analysis of Variance-	10			
ANOVA - Correlation Analysis				
Prescribed Books/Textbooks				
• Keshab Bhattarai (2015), "Research Methods for Eco	nomics" Un	iversity o	of Hull Business	
School, 3 <sup>rd</sup> Edition, London, UK				
• Kurien C. T., (1973), 'A Guide to Research, saugau	Publishers			
• Kothari, C.R., (2012), "Research Methodology: Meth	ods and Tec	hniques,	Willey Eastern	
Limited., Limited.				
• Bridget Somekh and Cathy Lewin, (2012) "Theory and	nd Methods	in Social	Science	
Research" New Delhi: Sage Publication,				

References

- Deepak Chawala and Neena sandhi, (2011), "Research Methodology: Concept of Cases", New Delhi: Vikas Publication House Pvt Limited.
- Krishnasamy O.R., (2010), "Methodology of Research in social Sciences" Himalaya Publishing House, Bombay.
- Shahjahan S., (2005), "Research Methods for Management" Third Edition, Jaico Publishing House, Mumbai
- PanneerSelvam, R (2010), "Research Methodology" PHI Learning Private Limited, New Delhi.
- Young, P.V., (1994), "Scientific Social Survey

Course Articulation Matrix															
Course	Programme Outcomes										rogramm	e Specific	Outcom	es	Countries Land
Outcomes	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level
CO 1	-	2	-	-	-	-	-	-	-	2		2	2		K 2
CO 2		2	2				2	2	-		2		2		K 3
CO 3		2	2				2	2	-	2		2	2		K4
CO 4		2	3	2	2	2		2	-	2	2	2		2	K 5
CO 5		2	3	2			2	2	-		2		2	2	K 6
Wt. Avg.		2	2	2	2	2	2	2	-	2	2	2	2	2	
Overall Mapping of the Course PO2 /PSO2															

# Theory of Money and Finance

Course Code											
С	redits	4									
Hour	s / Cycle	5									
Ca	tegory	Part - I	Core	Theor	у						
Se	mester	III		•	•						
Y	ear of	From the academic year 2023-2024 onwards									
Imple	mentation										
Course Objectives		This course is designed to provide students with a detailed understanding of the economic theory behind the way in which monetary policy can be designed and implemented. The course focuses on how monetary policy affects real economic activity, and then studies the instruments and goals of monetary policy with specific reference to India. The policy framework that acts as the premise on which the monetary policy operates is also discussed.									
CO #		Course Outc	ome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)						
On com	pleting the co	urse successfull	y, the student will be a	ble to							
CO 1	Outline evol from a basic electronic tra	ution of money a exchange to the ansactions.	nd how it has evolved more complex	PSO 1	K1						
CO 2	Apply Class theories of n students und demand for n	ical and Keynesia noney in the real- erstand the forces money.	an and post Keynesian life scenarios and help s affecting supply and	PSO 1	K2						
CO 3	With the stro frameworks financial and analyse the e	ong foundation or one can assess th l non-financial in effect of policy ch	n theoretical e functioning of termediaries and nanges on them.	PSO 3 PSO 4	К3						
CO 4	Interactions impact on In analysed thre	of the global fina dian Financial M ough quantitative	ncial markets and its arkets are studied and methods.	PSO 4	K4						
CO 5	Discuss the perceive its these instru- deflationary	e various mone efficiency and ments in contro trends in the eco	tary instruments and neasure the impact of illing inflationary and nomy.	PSO 4 PSO 5	K5 K6						

	SYLLABUS											
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL								
Ι	Module 1-Money and its evolution Classical quantity theory of money-Neutrality of money- Problem of invalid dichotomy-Real balance effect- Integration of money and real sectors-Keynesian theory of monetary economy-role of money in Keynesian approach- liquidity preference.	10	CO 1 to CO 5	K1 to K6								
II	<ul> <li>Module 2: Demand for money</li> <li>A. Post Keynesian approaches to Demand for money</li> <li>1. Transaction Demand for Money-An inventory theoretical Approach</li> <li>2. Portfolio Approach to money demand-Interest Elasticity of transactions, Precautionary and speculative demand for money</li> <li>3. Restatement of quantity theory of money</li> <li>4. Monetarism vs Keynesian</li> <li>B. Properties of financial assets-Markowitz The portfolio Selection-Efficient market hypothesis.</li> </ul>	20	CO 1 to CO 5	K1 to K6								
III	Module 3: Money and Interest Rates Real and monetary Theories of the rate of interest- Loanable Funds Theories of Interest-The expectations theory-Segmented market theory-The liquidity premium theory-Interest rate in India	15	CO 1 to CO 5	K1 to K6								
IV	Module 4 Finance and money supply A. Financial Intermediation Economic rationale for financial intermediation - Role of financial and non-financial intermediaries-structure of the financial markets -inside and outside money- Role of financial markets and institutions; monetary history of RBI- Management of non-performing assets – Debt Recovery Tribunals-Corporate Debt Restructuring System-SARFAESI Act.	15	CO 1 to CO 5	K1 to K6								

	B. Money Supply									
	Money stock measures-Factors affecting money supply-									
	Money Multiplier-Money supply analysis									
V	Module 5: Monetary Policy	15	<b>CO 1</b>	K1 to K6						
			to							
	Objectives-targets, indicators and instrument-lags-Rules		<b>CO</b> 5							
	vs Discretion in monetary policy (time consistency		005							
	problem), Monetary policy in India- Narasimham									
	Committee on Banking Sector Reforms 1991 and 1998,									
	Liquidity adjustment facility-REPO. MSF. MSS-Inflation									
	targeting monetary targeting multiple indicator approach-									
	Efficiency of credit control instruments. Conital adequacy									
	ratio and Decel norme									
	rauo and baser norms.									
Textboo	120									
TCXIDOC	N2									
Harris, la	awerence 1988, Monetary Theory; McGraw hill book compar	ıy.								
Jadhav N	Varendra (2006): Monetary Policy, Financial Stability& Centr	al Banking	, Macmillan.							
Handa, J	agdish. Monetary economics. Routledge, 2002.									
Referen	2A8									
Khan M	Y (1996) Indian financial System Tata McGraw Hill New	Delhi								
Titun, IV	. 1. (1990), indian infancial System, Tata Meestaw Infi, New	Denn.								
McCallu	m.Bennett.T.(1989);Monetary Economics :Theory and Policy	y, Macmilla	an Publishing	company.						
Don Pati	nkin 1965; Money, Interest and prices, Harper and Row Publ	ishers.								
Coval	shime History of monstary policy in India since independen	aa Coringa	r Driafa in Ea	onomica New						
Delhi S	nstinita. History of monetary policy in India since independent	ce. springe		conomics. Inew						
Denn. Springer, 2014.										
Memos, Mint Street. "REPORT ON CURRENCY AND FINANCE." (2007).										
Reserve Bank of India. <i>Report on Currency and Finance</i> . Reserve Bank of India., 1969.										
Suggested Reading										
Bain, Ke	eun and Howell's (2009). Monetary Economics: Policy and its	1 neoretica	i Basis, Palgi	tave						
Web Re	sources									
https://	rbi.org.in/history/Brief Chro1935to1949.html									
https://	www.rbi.org.in/commonman/English/History/Scripts/I	Brief_Chro	<u>1950to1960.a</u>	<u>spx</u>						
https://	https://www.rbi.org.in/commonman/English/History/Scripts/Brief Chro1960to1971.aspx									

https://www.rbi.org.in/commonman/English/History/Scripts/Brief\_Chro1968to1985.aspx https://www.rbi.org.in/commonman/English/History/Scripts/1985to1991.aspx https://www.rbi.org.in/commonman/English/History/Scripts/Chron1991to2000.aspx https://www.rbi.org.in/commonman/English/History/Scripts/2000onwards.aspx https://rbidocs.rbi.org.in/rdocs/Speeches/PDFs/DMBEM020310.pdf

Course Articulation Matrix														
G				Progra Outco	mme mes		I	Progran	nme Spo	itcomes	Cognitive Level			
Outcome	РО	РО	PO3	PO4	РО	PO6	PO7	PO8	PSO	PSO	PSO	PSO	PSO	
	1	2			5				1	2	3	4	5	
CO 1	3	2	-	2	-	-	-	-	3	-	-	-	-	K1
CO 2	3	-	-	2	3	-	-	-	-	2	3	-	-	K2
CO 3	3	2	-	-	3	-	2	-	-	2	3	-	-	K3
CO 4	3	-	-	-	3	2	2	-	-	-	2	-	-	K4
CO 5	3	-	-	-	-	2	-	-	-	-	2	-	2	K5/K6
Wt.	3	2	-	2	3	2	2	-	3	2	2.5	-	2	
Avg.														
	Overall Mapping of the CoursePO - 2.33/ PSO - 2.38													

## LABOUR ECONOMICS

Course Code													
Credits		5											
Hours / Cycle		6											
Ca	itegory	Part I	Elective		Theory								
Se	mester	III											
Y	ear of	From the acade	From the academic year 2023-2024 onwards										
Imple	mentation		-										
Course	Objectives	This course deals with issues pertaining to the labor market, wage theories, employing policies, trade unions, and collective bargaining in the globalized economy have becon virtually important for developing countries. This paper exposes students to theoretical well as empirical issues relating to the labor market with special reference to India.											
CO #		Course Outco	ome(s)	F Add	PSO lressed	Bloom's Taxonomy Levels (K1 to K5)							
On com	pleting the co	urse successfully	y, the student will be al	ole to									
CO 1	Identify and	understand basic	issues pertaining to the	PSO	1								
	labor marke	t, wage theories,	employment policies,	PSO	3								
	trade union globalized e	s and collectiv conomy.	e bargaining in the	PSO	4	K2							
CO 2	Acquire know	wledge about the	theoretical as well as	PSO	2								
	empirical is special reference	sues relating to the sum of the s	the labor market with	PSO	4	К3							
CO 3	Analyze vari	ous theories of w	age determination and	PSO	1								
	analyse the r	igidity in labour 1	markets.	PSO	3	K4							
	-			PSO	4								
<b>CO</b> 4	Elaborate of	n <mark>industrial disp</mark>	utes and the role of	PSO	1								
	collective ba	rgaining in the s	ettlement of industrial	PSO	2	K5							
	disputes			PSO	3								
				PSO	5								
CO 5	Perceive, App	praise, and Unders	stand labour legislation	PSO	2								
	in India and	the concept of	social security and its	PSO	4	K6							
	evolution an	d the status of soc	cial security in India.	PSO	5								

SYLLABUS										
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY						
				LEVEL						
Ι	Labour Markets Nature and Characteristics of Labor Markets in Developing Countries like India, Demand for Labor in relation to size and pattern of Investment, Choice of Technologies and labor Policies; Supply of Labor in relation to Labor Force; Labor Market Policies: Mobility and Production of Labor; Rationalization; Methods of recruitment and Placement, Employment service organization in India	10	CO 1 to CO 5	K2 to K6						
II	Employment									
	Employment and Development Relationship – Poverty and Unemployment in developing countries – Unemployment – Concept, Types, and Measurement, particularly in India; Impact of Rationalization, Technological Change, and Modernization on Employment in Organized Private Industry, Public Sector and Employment in Agricultural Sector; Analysis of Educated unemployment; Employment Policy in Five Year Plans and its evaluation.	20	CO 1 to CO 5	K2 to K6						
III	Wage Determination									
	Classical, Neo-Classical and bargaining theories of wage determination; Minimum wage, Fair wage in theory and practice; Discrimination in Labor markets, Wage determination in Rural, urban, organized and unorganized sectors. Inflation - Wage relationships; Analysis of rigidity in labour markets. Efficiency of Labor markets in wage determination; National Wage Policy; Wages and Wage boards in India; Bonus System and Profit Sharing.	20	CO 1 to CO 5	K2 to K6						
IV	Industrial Relations									
	Labour movement – Growth, Pattern and Structure of Labor Union in India, Achievements of Labor Unions; Causes of Industrial Disputes and their settlement and prevention mechanism; Role of tripartism; Current trends in Collective Bargaining; Role of Judicial Activism; Labor Legislation in	15	CO 1 to CO 5	K2 to K6						

	India; Indian Labors Laws and Practices in relation to International Labor standards.									
V	State and LabourConcept of Social Security and its evolution; Social assistance and Social insurance; Review and appraisal of state policies with respect to social security and labor welfare in India; Special Problems of labour, Child labour, Discrimination, and gender bias in the treatment of labour; Receeding state and its effects on the working of labor markets; Globalisation and Labor markets.	CO 1 to CO 5	K2 to K6							
Presci	ribed Books/Textbooks									
•	Lester, R A (1964) ; Economics Of Labor ; (2nd Edition ) Macmil	lan, New Y	ork.							
•	Papola, TS, PP Gosh and AN Sharma (Eds) (1993); Labor, Emplo	yment and	Industrial	Relations in						
	India, B R Publishing Corporations, New Delhi.									
•	Campbell R. McConnell and Stanley L. Brue (1992); Contemporat	y Labour E	conomics	s;(3rd						
	Edition);Mcgraw Hill Book Company	15 1								
•	Joyce P Jacobsen and Gilbert L Skillman (2004). Labour Markets	and Employ	ment Rel	lationships: A						
Deferre	Comprenensive Approach. London: Blackwell Publishing.									
Kelere	Datt G. (1006) Bargaining Power wages Employment: An analysis	is of agricul	tural Lab	our Markets in						
•	India Sage Publications New Delhi	is of agricul								
•	Breman Jan (2002) 'The Labouring Poor in India: Patterns of Ext	loitation S	ubordina	tion and						
•	Exclusion' Oxford University Press									
•	<ul> <li>Datt R. (2000). "Regional Patterns of Industrial Relations in India: Changing Scenario after</li> </ul>									
	Liberalization," Indian Journal of Labour Economics. 43(4). 1061-1098.									
•	• Hajela, P.D. (1998); Labor Restructuring in India; A critique of the new Economic Policies of Common									
	Wealth Publisher									
Web H	Resources									
1)	www.ilo.org									
2)	www.mospi.gov.in									
3)	www.cswb.gov.in									

Course Articulation Matrix															
Course Outcomes	Programme Outcomes Programme Specific												Outcom	es	
	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cogniuve Level
CO 1	-	2	-	-	-	-	-	-	-	2		2	2		K 2
CO 2		2	2				2	2	-		2		2		К 3
CO 3		2	2				2	2	-	2		2	2		K4
CO 4		2	3	2	2	2		2	-	2	2	2		2	K 5
CO 5		2	3	2			2	2	-		2		2	2	K 6
Wt. Avg.		2	2	2	2	2	2	2	-	2	2	2	2	2	
Overall Mapping of the Course PC											PO2 /	PSO2			
## **OPERATIONS RESEARCH**

Cour	rse Code											
C	redits	5										
Hour	s / Cycle	5										
Ca	tegory	Part I	Part I   Elective   Theory									
Ser	nester	III	III									
Y	ear of	2023-2024	2023-2024									
Imple	mentation											
Course	Objectives	The paper aims to introduce students to the basic building blocks of mathematical analysis used in modern economic theory and equip them with tools to do optimization in both static and dynamic economic environments.										
CO #		Course Outco	ome(s)	P Add	PSO ressed	Bloom's Taxonomy Levels (K1 to K5)						
On comp	oleting the co	ourse successfully	, the student will be at	ole to								
CO 1	understand decision m	the basic concep aking process	ts in managerial and	Р	SO 1	K1						
CO 2	Make use or real life ph	of various optimis enomenea	sation techniques in	Р	SO 2	K2						
CO 3	Analyse th the solution	e business inventon n to the societal no	ory models to provide eeds	Р	SO 6	K3						
CO 4	Examine the industrial starts day affairs	he importance of ( sector and to prov	Queuing models in the ide solution to day to	Р	SO 3	K4						
CO 5	Improvise available	the various decisi	on making with tools	Р	SO 4	K5/K6						

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	<b>BLOOM'S</b>
				TAXONOM
				<b>Y LEVEL</b>
Ι	Introduction to Management and Operations Research	18	CO1	K1 - K6
			-	
	Management and Decision making: Decision making and		CO5	
	Quantitative techniques – Definition of OR, Characteristics and			
	Methodology of OR, Historical development of OR,			
	Applications and Limitations of OR			

II	Optimisation Techniques	18	CO1	K1 - K6
	Linear Programming: Post-optimality analysis – Transportation problem: General Transportation Table, IBFS – North-West Corner Rule, Least- Cost method -Vogel's Approximation Method, , Testing the Optimality: Stepping Stone method, Modified Distribution (MODI) Method – Assignment problem: Methods of solving assignment problems: Complete Enumeration Method, Hungarian Assignment Method Network Analysis –PERT and CPM Techniques.		co5	
III	Inventory Models	18	CO1	K1 - K6
	<b>Inventory Management:</b> Types of inventories, inventory decisions, inventory costs, inventory management systems – Inventory models: Classical Economic Order Quantity (EOQ) Model, EOQ with Price breaks, Build up Model / EOQ Model for Production runs, Inventory Model with Planned shortages – Ideal Inventory System – Approaches to Inventory Control.		CO5	
IV	Queuing Models	18	CO1	K1 - K6
	<b>Queuing Systems:</b> General structure and operational characteristics of a queuing system – Queue Discipline, Queuing Models: Deterministic and Probabilistic Queuing Models.		co5	
V	Decision Theory	18	CO1	K1 - K6
	<b>Elements of Decision making:</b> Decision making under uncertainty: Maxi – Min and Maxi – Max Criteria, Hurwicz Criterion, Laplace Criterion, Mini – Max Regret Criterion, EMV and EOL Criterion – Decision-Tree Analysis		CO5	
Prescribed	l Books/Textbooks			
<ol> <li>Hamdy</li> <li>J.K.Sha</li> <li>Hiller F</li> <li>Ronald</li> <li>Harvey</li> <li>PHI Learn</li> </ol>	A.Taha, "Operations Research - An Introduction", Prentice Hall, rma, "Operations Research Theory and applications", Macmillan .S, Liberman G.J, "Introduction to Operations Research", 9th Ec L.Rardin, "Optimization in Operations Research", Pearson Educ M. Wagner, "Principles of Operations Research with application ing Private Limited, 2nd Edition, 2009	Ninth Ed n, 5th Edit dition, Mc cation, As ns to Man	lition, 201 tion, 2013 GrawHill ia, 1997. agerial Do	0. 3. , Inc., 2009 ecisions",

## References

1. Hillier, F. S. and G. J. Lieberman, Introduction to Operations Research, McGraw-Hill Publishing Company,

New York, NY, 1995.

- 2. Taha, H. A., Operations Research, Prentice Hall, Upper Saddle River, NJ, 1997.
- 3. Winston, W. L., Operations Research, Duxbury Press, Belmont, CA, 1994.

### **Suggested Reading**

- 1. Operations Research, Theory and Applications, Sixth Edition, J K Sharma, Trinity Press, Laxmi Publications Pvt. Ltd. 2016.
- 2. Operations Research, A M Natarajan, P Balasubramani, Pearson Education, 2005.
- 3. Introduction to Operations Research, Hillier and Lieberman, 8th Ed., McGraw Hill, 2007.

#### Web Resources

- 4. <u>HTTP://WWW2.INFORMS.ORG/RESOURCES/</u>
- 5. <u>HTTP://WWW.MIT.EDU/~ORC/</u>
- 6. <u>HTTP://WWW.IEOR.COLUMBIA.EDU/</u>

	Course Articulation Matrix															
Course		Programme Outcomes										Programme Specific Outcomes				
Outcomes		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Cognitive Level	
CO 1		3	3	-	2	3	2	1	-	3	-	-	-	-	K1	
CO 2		2	1	1	1	3	-	-	-	-	-	-	-	3	K2	
CO 3		3	2	1	3	3	1	2	-	-	-	-	-	3	K4	
CO 4		1	3	2	-	3	2	2	-	-	2	3	-	-	K3	
CO 5		-	-	3	1	3	3	3	-	-	3	-	3	3	K5 & K6	
Wt. Avg.		2.25	2.25	1.75	1.75	3	2	2	-	3	2.5	3	3	3		
	Overall Mapping of the Course PO-2.14 PSO – 2.5															

# **SEMESTER IV**

## **APPLIED ECONOMETRICS**

Cour	rse Code										
C	redits	4									
Hour	s / Cycle	6									
Ca	tegory	Part I	Core		Theory						
Ser	mester	IV									
Y	ear of	From the academic year 2023-2024 onwards									
Imple	mentation										
Course	Objectives	This paper focu practice. The ma quantitative met In line with the among econom students to a rai lag models, pan	uses broadly on econor ain objective of this cour- hods frequently employ aim of the course to in ic variables and to draw- nge of econometric model el data regression model	metrics, rse is to ed in er ntroduc v concludels suc lels suc ls and ti	with sp teach stu npirical a e the bas usions the ch as dum ime series	ecific focus on application and dents to use and interpret a set of nalysis of economic phenomena. ic tools to analyze relationships ereof, this course introduces the my variable models, distributed s models, besides others.					
CO #		Course Outco	ome(s)	P Add	SO ressed	Bloom's Taxonomy Levels (K1 to K5)					
On comp	pleting the co	urse successfully	, the student will be al	ole to							
CO 1	Relate theore econometric	etical and empiric models.	cal aspects and analyse	PS	501	K1					
CO 2	Illustrate the analysis usin	use of econometr g suitable softwa	ic models in Panel data re.	PS	SO 2	K2					
CO 3	Identify the its usage in e	importance of tine conometric analy	me-series analysis and vsis.	PS	50 3	К3					
CO 4	Test for dy applications.	namic economet	ric models and their	PS PS	SO 4 SO 5	K4					
CO 5	Select and a and complete	apply suitable ec e their research pr	conometric techniques rojects.	PS	505	K5					

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
I	Model Specification and Selection Specification Errors – Inclusion of Irrelevant Variables – Exclusion of Relevant Variables – Measurement Error - Ramsey's RESET Test – Model Selection Criteria - R <sup>2</sup> Criteria – Akaike's Information Criterion (AIC) – Schwarz's Information Criterion (SIC).	18	CO 1 to CO5	K1 to K5
II	Dummy Variable Models Definition – ANOVA and ANCOVA Models – Dummy Variable Trap – Uses – Test of Structural Stability – Interaction Effect – Deseasonalization – Piecewise Linear Regression – Qualitative Response Regression Model – Linear Probability Model – Limitations of LPM – LOGIT and PROBIT Models.	18	CO 1 to CO5	K1 to K5
III	Dynamic Econometric Models Role of Lag – Reasons – Distributed Lag Models – Ad Hoc Estimation –Auto Regressive Model – Koyck Approach to Distributed Lag Model – Median Lag – The Adaptive Expectations Model – Partial Adjustment Model – Almon Approach to Polynomial Distributed Lag Model – Causality – Granger Causality Test.	18	CO 1 to CO 5	K1 to K5
IV	Panel Data Regression ModelsPanel Data – Pooled Regression – The Constant Co- Efficient Model – Fixed Effect or Least Square Dummy Variable (LSDV) Regression Model – Random Effect Model – Fixed Effect Vs Random Effect – Hausman Test – Breusch and Pagan Test.	18	CO 1 to CO 5	K1 to K5
V	Time Series Analysis Stochastic Process – Stationary Stochastic Processes – Non Stationary Stochastic Processes Random Walk Without Drift – Random Walk With Drift – Unit Root – Trend Stationarity – Difference Stationary Stochastic Process – Integrated Stochastic Process – Test	18	CO 1 to CO5	K1 to K5

· · · · · · · · · · · · · · · · · · ·		
of Stationarity – Auto Correlation Function (ACF) And		
Correlogram – Unit Root Test – Dickey Fuller (DF) Test –		
Augmented Dickey Fuller (ADF) Test –Transforming		
Non-Stationary Time Series – Cointegration – Testing		
Cointegration – AR, MA, ARMA Models – Box Jenkins		
(BJ) Methodology – Partial Correlation Function (PACF)		
and Correlograms – Estimation of the ARIMA Model –		
Forecasting.		

#### **Textbooks:**

- Damodar N Gujarati & Sangeetha (2009), Basic Econometrics, Fifth edition, Tata McGraw Hill.
- Wooldridge J (2012): Introductory Econometrics: A Modern Approach, 5/E South Western.
- Green, William H., Econometric Analysis. Prentice Hall.

#### References

- Maddala G.S. (2002) Introduction To Econometrics, 3<sup>rd</sup> edition, John Wiley & Sons Ltd.
- Johnston J (2006): Econometrics Methods ,3<sup>rd</sup> Edition, McGraw Hill.
- Damodar N Gujarati, (2011) Econometrics By Example ,Ist edition , Palgrave Macmillan.
- Sankar Kumar Bhaumick (2015). Principles of Econometrics A Modern Approach Using E – Views, 1<sup>st</sup> Edition, Oxford University Press.
- Nachane DM (2006): Econometrics Theoretical Foundations and Empirical Perspective, Oxford University Press.

#### **Suggested Reading**

- Neeraj R. Hatekar (2010) Principles of Econometrics An Introduction Using R. Ist Edition, Sage.
- Marno Verbeek (2012): A Guide To Modern Econometrics , 4<sup>th</sup>Edition, Wiley And Sons.
- Ramanathan R (2002): Introductory Econometrics with Applications 5<sup>th</sup> Edition. Thomson Asia Private Limited.

#### Web Resources

https://www.youtube.com/watch?v=ybIcdda4ICw https://ocw.mit.edu/courses/14-387-applied-econometrics-mostly-harmless-big-data-fall-2014/pages/lecture-and-recitation-notes https://egyankosh.ac.in/handle/123456789/88881 https://www.researchgate.net/publication/269113492\_APPLIED\_ECONOMETRICS\_With\_Evi ews\_Applications

	Course Articulation Matrix													
Course				Prog	ramme (	Dutcome	es			Programme Specific Outcomes				G Cognitive Level
s	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	3	3		3					3					K1
CO 2		3	3							2				K2
CO 3		3	3	2	2		3				3			K3
CO 4			2	3	3	2	2					3	2.5	K4
CO 5			3	3		3	3						3	K5
Wt. Avg.	3	3	2.75	2.75	2.5	2.5	2.66		3	2	3	3	2.75	
	Overall Mapping of the Course													PO-2.7/ PSO-2.75

## INTERNATIONAL TRADE AND FINANCE

Cour	se Code										
С	redits	5									
Hour	s / Cycle	6									
Ca	tegory	Part	CORE	THEO	DRY						
Sei	mester	V									
Y	ear of	From the academic year 2023-24 onwards									
Imp	lementation										
Course	Objectives	International tra has enabled overall ecor methods of international trade with e the internati the Balance global trade	International trade has played a very important role in the growth of the global economy. It has enabled the countries to grow economically, adopt new technologies, and improve the overall economic welfare of their citizens. This course uses the same fundamental methods of analysis employed in other branches of Economics to study patterns of international trade and finance. This course deals with the basic question of why countries trade with each other, what are the gains from trade, debates on globalization regarding the international movement of factors of production, trade agreements, disequilibrium in the Balance of Payments accounts, determinants on exchange rates, and the debate on global trade and financial institutions.								
CO #		Cour	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)							
On comp	pleting the co	urse successfull	y, the student will	be able to	<b>I</b>	1					
CO 1	Understand from the importan trade and	the theoretical un e classical to the t and widely prev l its impact on dev	nderpinnings of in modern school of alent phenomena s veloping economics	ternational trade rig f thought and analys uch as intra – indust	nt PSO-1, se PSO-2, ry PSO-5	K2					
CO 2	Apply of the trade and internatio	more recent altern international fact onal business worl	native theories that or movements to the d around us.	deal with internation he understanding of th	al PSO-1, ne PSO-2, PSO-5	K3					
CO 3	Analyse the analyse th policies for a	fundamentals of ne various chieving internal a	international mon	netary economics ar rium.	d PSO-1, PSO-2,	K4					
CO 4	Evaluate the automatic others. A and the c trade mul	ories of Internati c Adjustment Pro Also analyse the in lomestic Banking ltiplier.	uilibrium dealing wi l Dishoarding, besid n Balance of Paymen vorking of the Foreig	th PSO-1, es PSO-2 ts PSO-3, gn PSO-5	K5						
CO 5	Analyse and arrangem liberalizat	evaluate the vari ents among na tion on Indian tra	ous issues in trade tions. And eva de.	e policy and moneta luate the impact of	ry PSO-2, of PSO-4 PSO-5	K6					

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXON
				OMY
				LEVEL
Ι	INTRODUCTION	15	CO1	K1 TO K6
	An overview of the classical Neo Classical and modern		TO	
	theories of trade - The Rybezynski Theorem -		CO5	
	Concept and Policy implications of Immiserizing			
	growth – causes of emergence and measurement of			
	intra – industry trade and its impact on developing			
TT	economics.	1 5	<u>CO1</u>	
11	Alternative Theories of Trade and Intra Industry	15		KI IU KO
	Trade Imitation lag hypothesis (Dosper)		10 CO5	
	Product Cycle Theory – (Vernon) – Linder's		005	
	Theory – Demand Oriented – Kemp Model –			
	Krugman Model – Intra Industry Trade – (Falvey			
	Model) – Economic Growth and international			
	Trade – International Factor Movements.			
III	INTERNATIONAL FINANCE	15	CO1	K1 TO K6
	Fundamentals of International Monetary Economics -		TO	
	Balance of payments Account – The foreign		CO5	
	exchange Market – Monetary Portfolio balance			
	approaches to the external Balance – Portfolio			
	ROP discovilibrium Drigo and income			
	Adjustments – Expenditure-changing and			
	expenditure switching policies and direct controls			
	for adjustment – policies for achieving internal and			
	external equilibrium			
	simultaneously under alternative exchange rate regimes.			
IV	INTERNATIONAL MONETARY	15	CO1	K1 TO K6
	ECONOMICS		ТО	
	International Monetary Theory and application -		CO5	
	International Monetary Equilibrium – the			
	automatic Adjustment Process – Hoarding and			
	Dishoarding – The Monetary Approach – Relative			
	Income Adjustment International Capital			
	Mobility – Channel of Adjustments – BOP and			
	Domestic Banking System – Foreign trade			
	multiplier with or without repercussions and			
	determination of national income and output.			
V	GLOBAL TRADING SYSTEMS	15	CO1	K1 TO K6
	Issues in world monetary arrangements – trade policy –		ТО	
	instruments – impact of restrictions – New		<u>C</u> O5	

Protectionist Approach to	trade Policy
Intervention; Economic Integrat	ion – Forms of
Integration – Specific Country ca	se; Global Issues
in International Economics	– International
Monetary System – Bretton Wood	s System – Goals
of IMF, SDRs – International Lie	quidity – GATT,
WTO – Impact of liberalization	European union.
Trade Policy in India – Trade Re	forms since 1991
and changes thereafter. Foreign T	rade Policy 2015-
20.	

#### Prescribed Books/Textbooks

- 1. Krugman P., Obstfeld M., Melitz M. (2015). International Economics: Theory and Policy, 2015 (10th edition).
- 2. Appleyard D., Field A. and S. Cobb (AFC), International Economics, 6th edition, 2008.

#### References

- 1. International Economics. Author, H. G. Mannur. Publisher, Vikas, (1995)
- 2. Sodersten B., Reed G. (SR) International Economics, 3rd ed. Macmillan, 1994.
- 3. Robert J. Carbaugh. International Economics (10th Edition) (2005). Thomson South-Western.
- 4. Dominic Salvatore. Theory and Problems of International Economics (3rd Edition). Mc-Graw Hill Inc.

#### Suggested Reading

- 1. Indian Economy. 72nd Ed. Gaurav Datt and Ashwani Mahajan. S Chand Publishing; Seventy Second edition (2016).
- 2. Indian Economy. Madhur M. Mahajan. Pearson India Educational Services Pvt. Ltd. (2020).
- 3. The Indian Economy: Policies, Practices and Heresies. Jayanta Sarkar. Pearson Longman (2007).

#### Web Resources:

1. <u>https://en.wikipedia.org/wiki/List of countries by trade-to-GDP ratio#/media/File:Trade Openness, OWID.svg</u>

2. <a href="https://pages.stern.nyu.edu/~nroubini/NOTES/CHAP3.HTM">https://pages.stern.nyu.edu/~nroubini/NOTES/CHAP3.HTM</a>

3. <u>https://www.epw.in/journal/2023/40/commentary/foreign-trade-policy-</u> 2023.html#:~:text=India's%20Foreign%20Trade%20Policy%20(FTP,(Press%20Information%20 <u>Bureau%202023).</u>

	Course Articulation Matrix														
Course Out			Pro	gramme Out	comes		Р	rogramm	Cognitive Level						
com es	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5			
CO 1	2.7	2.7	2.7	2.7	2.7		2.7	2.7	2.7			2.7	K2		
CO 2	2.7	2.7	2.7	2.7	2.7		2.7	2.7	2.7			2.7	K3		
CO 3	2.7	2.7						2.7	2.7				K4		
CO 4	2.7	2.7	2.7	2.7	2.7		2.7	2.7	2.7	2.7		2.7	K5		
CO 5	2.7	2.7	2.7	2.7	2.7		2.7		2.7	2.7		2.7	K6		
Wt. Avg.	2.7	2.7	2.7	2.7	2.7		2.7	2.7	2.7	2.7		2.7			
	Overall Mapping of the Course PO: 2 PSO: 2														

## CAPITAL MARKETS AND INVESTMENT THEORIES

-	<u> </u>									
Cou	rse Code									
C	redits	4								
Hour	rs / Cycle	6								
Ca	ategory	Part I	Core	Theory						
Se	mester	IV								
Y	ear of	2023-2024								
Imple	mentation									
Course (	Objectives	The primary ob modern portfolio be equipped wi construct portfol serves as an intr with a solid un investment analy	modern portfolio theories and investment analysis. By the end of the course, students will be equipped with the necessary tools to critically evaluate investment alternatives and construct portfolios tailored to achieve specific risk-return characteristics. This course serves as an introduction to asset pricing and capital markets, aiming to provide students with a solid understanding of economic concepts and financial theories essential for investment analysis.							
CO #		Course Outco	ome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)					
On com	pleting the co	urse successfully	, the student will be al	ole to						
CO 1	To help stud fluctuations with investm	ent understand the in capital market a pents into these ma	e nuances of causes of and the risks associated arkets.	PSO 1	K1					
CO 2	Apply fund making effect students to u market cond	amental and te ctive investment de use appropriate to itions.	chnical analysis for ecisions and equipping ools to understand the	PSO 1 PSO 2	K2					
CO 3	The foundati students to o of investors a return charac	on on theoretical ne can assess the and construct port cteristics.	frameworks can help investment decisions folio with desired risk	PSO 3 PSO 4	K3					
CO 4	By understar its instrument the various in	nding the role of d ats, it helps in ana nstruments in the	lerivative markets and lysing the working of financial market.	PSO 4	K4					
CO 5	To analyse measures addinvestments.	Indian capital ma	rkets and the various try to increase foreign	PSO 2 PSO 4	K5 K6					

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOM Y LEVEL
Ι	Module I: Introduction to capital markets Capital Markets and its functions- Institutional framework of Capital Markets- Investments versus speculation- Investment categories -Investment process-types of risk – systematic and unsystematic – risk and return and its impact on investment decision.	10	CO 1 to CO 5	K1 to K5
II	<ul> <li>Module II: Fundamental and Technical Analysis</li> <li>a. Fundamental analysis - Economic analysis - Short term and long term forecasting-analysis of macroeconomic indices-industry analysis-key characteristics in Industry analysis- Industry share price relative to industry earnings-industry life cycle theory - Introduction to financial ratios, earnings per share –Price Earnings ratio-applied stock valuation.</li> <li>b. Technical analysis- Fundamental versus Technical analysis- market indicators forecasting individual stock performance- Dow theory - Price indicators - Volume indicators-credit balance theory-chart analysis.</li> <li>c. Credit rating-definition, types and functions-International and Indian agencies.</li> </ul>	20	CO 1 to CO 5	K1 to K5
III	Module III: Theories of capital markets and investments Efficient Market Hypothesis and random walk theory- Markowitz Modern Portfolio Theory-Capital Asset pricing model-capital market line-Arbitrage pricing theory-Chaos theory in the financial markets.	15	CO 1 to CO 5	K1 to K5

IV	Module IV: Derivative Markets Introduction to derivate markets-Futures and options- historical evolution to these instruments-Difference between forwards and futures-Put and call options- determinants of option value- options positions and strategies-Black Scholes model of option pricing-Interest and currency Swaps.	15	CO 1 to CO 5	K1 to K5
V	Module V: Indian Capital Market. Evolution of the Indian Stock market-Indian financial system –Structure, functions and regulatory framework- SEBI-Mutual Funds-Venture Capitalist-Hedge Funds- Merchant Banking-Universal Banking –External commercial borrowing-performance of Indian stock market, Current issues-scams and international financial crises.	15	CO 1 to CO 5	K1 to K5

#### Textbooks:

- F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
- Khan, M.Y., Indian Financial system, Tata McGraw Hill, New Delhi 1996.
- Donald E. Fischer, Ronald J. Jordan, Security Analysis and Portfolio Management, Prentice Hall,6<sup>th</sup> ٠ edition,2006.
- Richard Pike and Bill Neate, Corporate Finance and Investment (Decisions and Strategies), Prentice ٠ Hall of India Private Limited, New Delhi (1999).

#### **References:**

- Johnson, H.S, financial institutions and Markets, McGrow Hill, New Delhi, 1993. •
- Fama, E.F. and Miller, M. H., "Theory of Finance", H.Y. Hold, Rinehert and Winston, 1972. ٠
- Hull, J., "Options, Futures and Other Derivative Securities", Upper Saddle River, N. J., Prentice Hall, ٠ 6th edition, 2006, ISBN 013149908-4.
- King, David N. (1999), Financial Claims and Derivatives, International Thomson Business Press.
- Financial dailies: Livemint and Economic Times.

Suggested Reading

Chandra, Prasanna (2008), Investment Analysis and Portfolio Management, Tata McGraw Hills •

Web Resources

https://hbr.org/1982/01/does-the-capital-asset-pricing-model-work

https://viking.som.yale.edu/an-introduction-to-investment-theory/chapter-vi-the-arbitrage-pricing-theory/

https://www.jstor.org/stable/2327839

https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=1810781

https://www.chicagobooth.edu/review/eugene-fama-efficient-markets-and-the-nobel-prize

https://www.britannica.com/money/what-is-the-efficient-market-hypothesis

https://www.primedatabase.com/Article/dir-98ar1.pdf

	Course Articulation Matrix													
Course		Programme Outcomes								Progra	mme Sj	oecific O	outcomes	Cognitive Level
Outcome	РО	РО	PO3	PO4	РО	PO6	PO7	PO8	PSO	PSO	PSO	PSO	PSO5	
	1	2			5				1	2	3	4		
CO 1	3	2	-	2	-	-	-	-	3	-	-	-	-	K1
CO 2	3	-	-	2	3	-	-	-	-	2	3	-	-	K2
CO 3	3	2	-	-	3	-	2	-	-	2	3	-	-	K3
CO 4	3	-	-	-	3	2	2	-	-	-	2	-	-	K4
CO 5	3	-	-	-	-	2	-	-	-	-	2	-	-	K5
Wt.	3	2	-	2	3	2	2	-	3	2	2.5	-	-	
Avg.														
Overall Mapping of the Course $PO - 2.33/$ PSO - 2.5														

## DISSERTATION

Course Code											
С	redits	4									
Hour	s / Cycle	6									
Ca	tegory	Part I	Core	Theory	-						
Sei	mester	IV	IV								
Y	ear of	2023-2024	2023-2024								
Imple	mentation										
		The objective of this course is to develop advanced research skills by conducting original									
		economic research, critically analyzing complex economic theories and data, and									
Course C	Dbiectives	contributing to the academic body of knowledge. Students will demonstrate proficiency in									
	···)	quantitative n	nethods effectively	communicate	findings and propose policy						
		recommondatio	ne addressing contempo	rory oconomic c	ballangas						
		Tecommendatio	its addressing contempo								
CO #		Course Oute		PSO	Bloom's Laxonomy Levels						
CO #		Course Outco	ome(s)	Addressed	(KI to K3)						
On com	pleting the co	urse successfully	y, the student will be al	ble to							
				200 1							
CO 1	Recall and	describe key e	conomic theories and	PSO 1	K1						
	principles re	levant to the cho	osen dissertation topic,								
	establishing	a solid found	dation for advanced								
	research.										
$CO^2$	Interpret on	d summariza a	victing literature and		K)						
	ampirical stu	dias in the select	ted field of economics	PSO 2	K2						
	demonstratin	a an understandi	ng of current academic	PSO 3							
	discourse	ig all understand	ing of current academic	100 5							
CO 3	Apply approx	nriate economic r	nodels and quantitative	PSO 3	K3						
005	methods to	analyza real w	orld data identifying	PSO 4							
	nettorns and	rolationships po	rtinant to the research	1001							
	patterns and	relationships pe	functio die research								
	question.										
CO 4	Critically ev	aluate and dissed	et economic arguments	PSO 4	K4						
	and methodo	ologies in the con	text of the dissertation.	PSO 5							
	distinguishin	g between differ	ent schools of thought								
	and methodo	logical approach									
CO 5	Integrate div	verse economic	theories and empirical	PSO 2	K5/K6						
	findings int	to a cohesive	framework, critically	PSO 4							
	assessing th	eir validity and	proposing innovative	PSO 5							
	solutions or	policy recommen	dations.								

	Course Articulation Matrix													
Course	Programme Outcomes								Programme Specific Outcomes				Cognitive Level	
Outcome	РО	РО	PO3	PO4	РО	PO6	PO7	PO8	PSO	PSO	PSO	PSO	PSO	
	1	2			5				1	2	3	4	5	
CO 1	3	3	-	3	-	-	-	-	3	-	-	-	-	K1
CO 2	3	3	2	2.75	3	-	3	-	3	3	3	-	-	K2
CO 3		2	3	3	2.75	3	2.75	-	-	-	3	3	-	K3
CO 4	-	-	3	3	3	2.75	3	-	-	-	-	2	2	K4
CO 5	-	3	3	3	3	3	3	-	-	3	-	3	3	K5/K6
Wt.	3	2.75	2.75	2.95	2.93	2.91	2.93	-	3	3	3	2.67	2.5	
Avg.														
Overall Mapping of the Course PO – 2.88/ PSO – 2.83														

## HEALTH ECONOMICS

Cou	rse Code									
C	redits	5								
Hour	s / Cycle	6								
Ca	itegory	Part I - b	Elective		Theory					
Se	mester	IV								
Y	ear of	From the academic year 2023-2024 onwards								
Imple	mentation	-								
Course	Objectives	Health economi the study of how and groups in so decision-makers choices they ma	Health economics is a paper where the demand and supply of health care is analysed the study of how scarce healthcare resources are allocated among competing interven and groups in society. This course introduces basic concepts and practical issues face decision-makers at all levels in the health system in allocating scarce resources so the choices they make maximize health benefits to the population.							
CO #		Course Outco	ome(s)	P Add	PSO ressed	Bloom's Taxonomy Levels (K1 to K5)				
On com	pleting the co	urse successfully	y, the student will be al	ble to						
CO 1	Identify and morbidity, m	understand the he ortality, and life	ealth indicators such as expectancy rate.	PSO PSO PSO	1 3 4	K2				
CO 2	Acquire know in health den	vledge and Analys nand and health s	se the theoretical issues upply systems in India	PSO PSO	2 4	K3				
CO 3	Analyze the India includ health and fu the various h	availability of h ing public and p inctioning of the ealth plans adopt	ealth infrastructure in orivate expenditure on health care system and ed by the Government.	PSO PSO PSO	1 3 4	K4				
CO 4	Examine the specific reference	e principles of the agein	health insurance with g population.	PSO PSO PSO PSO	1 2 3 5	K5				
CO 5	Evaluate the institutions voluntary or	role of public as such as WHO, ganisations.	nd international health UNICEF and other	PSO PSO PSO	2 4 5	К6				

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
I	Introduction Definition of Health – Health Indicators – Demography of India – Mortality – Morbidity – Life Expectancy at Birth – Sex Ratio – Disability-Adjusted Life Year (DALY) – Quality-Adjusted Life Year (QALY) Techniques, Calculations and Comparisons – Body Mass Index (BMI) - Nutrition and Health – Measures of Nutrition – Nutrition and measures of poverty –Human Development Index –Global Development Index -Development indicators.	10	CO 1 to CO 5	K2 to K6
II	Demand for Health Care Private, Merit and Public goods – Resource allocation between health care and other commodities – Relevance of Consumer demand theory to health – health care and consumer choice – demand for medical care – factors influencing demand for medical care – Price, Income and Cross elasticity of demand	20	CO 1 to CO 5	K2 to K6
III	Supply of Health Care The Supply of Public and Private Health care service – Health as a durable good – Hospital Production function – objectives' and constraints of hospital firm – Optimisation of Hospital size – Hospital Cost and efficiency – Physician as labour – Physician Supply curve – Physician payment mechanism - Physician induced demand – Hospital – Doctor Interaction.	20	CO 1 to CO 5	K2 to K6
IV	Policies and Programmes of Health Care Health Insurance – Private and Public Health Insurance – role and functions -Health Policy – Growth of Aging population - Policy and Programmes for Aging Population –ASHA – National Nutritional Programmes – Universal Immunization Programme (UIP) –Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) –JanaiSshsishu Suraksha Karyakarm (JSSK) – Rashtriya Kishore SwasthyaKaryakram (RKSK) – National Health Scheme (NHS).	15	CO 1 to CO 5	K2 to K6

V	Health and Institutions									
	Role and Functions of WHO –UNICEF-FPAI- National Health Assurance Mission –National Rural Health Mission – National Urban Health Mission – National Family Health SurveyCO 1 to CO 5K2 to K6									
Prescribed	1 Books/Textbooks									
•	Health Economics by Bhattacharya, Hyde, and Tu (2013).									
•	Monica Dasguptha, Lincoln C. Chen and T.N.Krishnan (eds),	Health, Pove	erty and L	Development in						
	India, Oxford University Press, New Delhi. (1996)									
•	• Glied S, Smith P. The Oxford handbook of health economics. 1st ed. New York: Oxford University Press; 2011.									
•	• Feldstein PJ. Health care economics. 7th ed. New York: Delmar Publishers; 2012.									
Reference	8									
•	Mills A, "Economics of Health in Developing Countries" Oxfe	ord Universi	ty Press,	Oxford.						
•	Mills A Lee K (Edited) "Health Economics Research in Devel	oping Coun	tries" Oxf	ford University						
	Press									
•	Human Development Report 2016									
•	World Health Report 2006, 2007, 2008 and 2010									
•	National Family Health Survey III and IV									
•	Culyer AJ. The dictionary of health economics. 2 <sup>nd</sup>									
Web resou	irces									
1. <u>www.ur</u>	<u>nicef.org</u>									
2. <u>www.india.gov.in/nealth-family-welfare</u> 3. www.fpai.org										
4. <u>www.ip</u>	pi.mohfw.gov.in									

	Course Articulation Matrix														
Course Outcomes	Programme Outcomes									Р	rogramm	e Specific	Outcom	es	Cognitive
	PO1	PO2	PO3	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	Level
CO 1	-	2	-	-	-	-	-	-	-	2		2	2		K 2
CO 2		2	2				2	2	-		2		2		K 3
CO 3		2	2				2	2	-	2		2	2		K4
CO 4		2	3	2	2	2		2	-	2	2	2		2	K 5
CO 5		2	3	2			2	2	-		2		2	2	K 6
Wt. Avg.		2	2	2	2	2	2	2	-	2	2	2	2	2	
Overall Mapping of the Course PO2 /PSO2															

## TAMIL NADU ECONOMY

Course Code											
C	redits	5									
Hour	s / Cycle	6									
Ca	tegory	Part I	Elective		Theory						
Sei	mester	IV			-						
Y	ear of	2023-2024	2023-2024								
Imple	mentation										
		To understand the relevance of regional economics; and to focus on the socio-economic									
Course Objectives		development iss	ues of the state of Tamil	Nadu w	hile edu	cating about the history of various					
Course (	Dbjectives	movements that	has shaped Tamil Nac	lu and a	ssessing	various plans and infrastructural					
		development of the state									
		development of	the state.			Plaam?a Tawanamy Lavala					
CO #		Course Outco	ome(s)	PS Addr	SO essed	(K1 to K5)					
On com	pleting the co	urse successfully	v, the student will be al	ole to							
CO 1	Recall the e	volution of Tam	il Nadu as a state, its	PSO 2		K1					
	ideology and state.	d the growth of	various sectors in the	PSO 4							
CO 2	Explain the	impact of the I	Dravidian ideology in	PSO 2		K2					
	shaping up th in Tamil Nac	he economic deve lu.	elopment of all sectors	PSO 3							
CO 3	Identify the i	mpact of various	plans on the growth	PSO 3		K3					
	and stability	of Tamil Nadu ed	conomy.								
<b>CO</b> 4	Critically and	alyse the recent e	conomic policies and	PSO 4		K4					
	their implica	tions for the grow	th and development								
	of Tamil Nac	du.	-								
CO 5	Assess and	discuss the so	cio-economic factors	PSO 3		K5/K6					
	influencing t	he growth traject	ory of the Tamil Nadu	<b>PSO 5</b>							
	economy a	and elaborate	into its strengths,								
	weaknesses,	opportunities, an	d threats for informed								
	decision-mal	king and policy for	ormulation								

	SYLLABUS			
UNIT	CONTENT	HOURS	COs	BLOOM'S
				I AXUNU MY
				LEVEL
Ι	INTRODUCTION	10	CO 1	K1 to
	History of Tamil Nadu – Dravidian Culture –		to	K6
	Dravidian Movement – Contribution of Self Respect		CO 5	
	Movement and Justice Party. The geographical		000	
	features of Tamil Nadu – Natural Resources in Tamil			
	Nadu: Land, Forest, Water, Fisheries and Minerals.			
II	HUMAN CAPITAL	20	CO 1	K1 to
	Human Resources in Tamil Nadu: Size, growth and		to	K6
	density of population in Tamil Nadu - The		CO 5	
	occupation pattern in Tamil Nadu - Analysis of the			
	2011 census. Social Inputs in Development Efforts:			
	Education, Health, and Nutrition – Water Supply,			
	Housing and Slums – Evaluation of poverty			
	alleviation programmes in Tamil Nadu.			
III	PLANNING	15	CO 1	K1 to
	Economic Planning and Development in Tamil Nadu:		to	K6
	Vision 2023 – Special Economic Zones (SEZ) -		CO 5	
	Trends in Export & Import – IT Sector - Role of			
	Power – Power as a bottle in Tamil Nadu economy -			
	Welfare Schemes - Evaluation of Poverty Alleviation			
	Programmes in Tamil Nadu.			
IV	AGRICULTURE AND INDUSTRY	15	CO 1	K1 to
	Agriculture: Agricultural Growth – Cropping pattern		to	<b>K6</b>
	- Agricultural inputs: Irrigation, lerunzer -		CO 5	
	Agricultural Marketing: Co-operative movement in			
	ficheries Industry: growth of industry changes in			
	industrial structures. Major industrias: cotton			
	textiles sugar cement automobiles leather and			
	electronics – Small and Cottage industries – light			
	Engineering industries – Industrial Finance			
V	SERVICE SECTOR	15	CO 1	K1 to V6
	Infrastructure in Tamil Nadu: Transport: road. rail. air		to	NT 10 N0
	and sea - Energy generation: Hvdro. thermal and			
	nuclear power systems - Banking – Housing - Social		005	
	Welfare - Programmes of the State Government -			

Education and health - Unemployment - Anti-		
poverty strategies - PDS - Women Development -		
Current issues in Tamil Nadu.		

#### Textbooks

- MIDS, Tamil Nadu Economy: Performance & Issues, IBH Publishing Co., New Delhi. 2017.
- Leonard A.G., Tamil Nadu Economy, Macmillan Books Ltd, New Delhi, 2006.

#### References

- Kurien, C.T and James Joseph, Economic Change in Tamil Nadu: A Regionally and Functionally Disaggregated Study, Allied Publishers Pvt. Ltd., New Delhi. 1979.
- Manickam. S, Economic Development of Tamilnadu in Perspectives, 2007.
- Perumalsamy. S, Economic Development of Tamil Nadu, S. Chand, New Delhi, 1995.
- Rajalakshmi, N, Tamil Nadu Economy, Business Publication, Mumbai. 1999.

#### Suggested Reading

• Economy of Tamil Nadu: Realities and Challenges, P.J. Gandhi, P. Anbalagan, Regal Publishers (2016)

#### Web Resources

- <u>www.tn.gov.in</u>
- <u>http://www.geocities.com/tamiltribune/e/index.html</u>
- <u>http://www.tidco.com/tn\_policies/focus\_tamilnadu\_Nov\_2002</u>.
- <u>http://www.webindia123.com/tamilnadu/economy/agriculture.htm</u>
- <u>http://www.cmie.com/database/?service=database-products/tamil-nadu.htm</u>

Course Articulation Matrix														
Course	Programme Outcomes							Programme Specific Outcomes					Cognitive Level	
Outcome	PO1	PO2	РОЗ	PO4	PO5	PO6	PO7	-	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	2.5	2.5	-	-	-	-	-	-	-	2.5	-	2.5	-	K1
CO 2	2.5	2.5	2.5	-	2.5	-	-	-	-	2.5	2.5	-	-	K2
CO 3	-	2.75	2.75	-	2.75	-	-	-	-	-	2.75	-	-	К3
CO 4	-	2.25	2.25	-	-	2.25	2.25	-		-	-	2.25	-	K4
CO 5	-	2.25	2.25	2.25	2.25		2.25	-	-	-	2.25	-	2.25	K5/K6
Wt.	2.5	2.45	2.437	2.25	2.5	2.25	2.25	-	-	2.5	2.5	2.375	2.25	
Avg.														
Overall Mapping of the Course PO – 2.377/ PSO – 2.406														