



UNIVERSITY OF CALICUT

Abstract

General and Academic IV- Faculty of Humanities- Scheme and Syllabus of BA Economics Honours Programme -in tune with the CUFYUGP Regulations 2024, with effect from 2024 Admission onwards - Approved-Subject to ratification by the Academic Council-Implemented- Orders Issued

G & A - IV - B

U.O.No. 9395/2024/Admn

Dated, Calicut University.P.O, 15.06.2024

*Read:-*1.U.O.No. 3103/2024/Admn dated 22.02.2024.

2.Item No 1 of the minutes of the combined meeting of the Board of Studies in Economics UG and PG held on 23.04.2024.

3.Remarks of the Dean, Faculty of Humanities dated 25.05.2024.

4. Orders of the Vice Chancellor in the file of even No and dated 01.06.2024.

ORDER

1. The Regulations of the Calicut University Four Year UG Programmes (CUFYUGP Regulations 2024) for Affiliated Colleges, has been implemented with effect from 2024 admission onwards, vide paper read as (1) above.
2. The combined meeting of the Board of Studies in Economics UG and PG held on 23.04.2024, vide paper read as (2) above, has approved the scheme and syllabus of the B.A. Economics Honours programme in tune with CUFYUGP Regulations 2024 with effect from 2024 Admission onwards.
3. The Dean, Faculty of Humanities vide paper read as (3) above, has approved the minutes of the combined meeting of the Board of Studies in Economics UG and PG held on 23.04.2024.
4. Under these circumstances, considering the urgency, the Vice Chancellor has approved the minutes of the combined meeting of the Board of Studies in Economics UG and PG held on 23.04.2024 and has accorded sanction to implement the scheme and syllabus of the B.A.Economics Honours programme in tune with CUFYUGP Regulations 2024 with effect from 2024 Admission onwards, subject to ratification by the Academic Council.
5. The scheme and syllabus of the B.A. Economics Honours programme in tune with CUFYUGP Regulations 2024 is thus implemented with effect from 2024 Admission onwards, subject to ratification by the Academic Council.
6. Orders are issued accordingly. (Syllabus appended)

Ajayakumar T.K

Assistant Registrar

To

1.The Principals of all Affiliated Colleges 2. Deputy Registrar CDOE

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Forwarded / By Order

Section Officer

UNIVERSITY OF CALICUT

B.A. ECONOMICS

HONOURS

(MAJOR, MINOR AND GENERAL FOUNDATION COURSES)

SYLLABUS & MODEL QUESTION PAPERS

w.e.f. 2024 admission

(CUFYUGP Regulations 2024)

B.A. ECONOMICS
HONOURS
(MAJOR, MINOR AND GENERAL FOUNDATION COURSES)

SYLLABUS

PROGRAMME OUTCOMES (PO):

At the end of the graduate programme at Calicut University, a student would:

PO1	Knowledge Acquisition: Demonstrate a profound understanding of knowledge trends and their impact on the chosen discipline of study.
PO2	Communication, Collaboration, Inclusiveness, and Leadership: Become a team player who drives positive change through effective communication, collaborative acumen, transformative leadership, and a dedication to inclusivity.
PO3	Professional Skills: Demonstrate professional skills to navigate diverse career paths with confidence and adaptability.
PO4	Digital Intelligence: Demonstrate proficiency in varied digital and technological tools to understand and interact with the digital world, thus effectively processing complex information.
PO5	Scientific Awareness and Critical Thinking: Emerge as an innovative problem-solver and impactful mediator, applying scientific understanding and critical thinking to address challenges and advance sustainable solutions.
PO6	Human Values, Professional Ethics, and Societal and Environmental Responsibility: Become a responsible leader, characterized by an unwavering commitment to human values, ethical conduct, and a fervent dedication to the well-being of society and the environment.
PO7	Research, Innovation, and Entrepreneurship: Emerge as a researcher and entrepreneurial leader, forging collaborative partnerships with industry, academia, and communities to contribute enduring solutions for local, regional, and global development.

PROGRAMME SPECIFIC OUTCOMES (PSO):

At the end of the BA Economics Honours programme at Calicut University, a student would:

PSO1	Understand basic concepts of economics
PSO2	Examine the socio-economic problems and find out the strategies to overcome these problems through community engagement
PSO3	Achieve organizational, management and leadership skills
PSO4	Acquire skills to evaluate contemporary socio-economic issues by accessing information from various sources and analyzing the collected information using software
PSO5	Understand diverse needs of the marginalized segments of the society and equip them to engage in endeavours leading to their emancipation
PSO6	Be able to inculcate ethical values and to avoid unethical practices such as plagiarism, misrepresentation of data and violation of intellectual property rights

PSO7	Apply analytical thinking to various economic phenomena, including analysis and evaluation of economic policies, practices, evidences, arguments, claims and beliefs
PSO8	Develop appropriate skills and knowledge to address the real world economic issues in familiar and unfamiliar contexts
PSO9	Formulate appropriate and relevant research questions, develop methodology and tools for data collection, presentation and analysis, and predict cause-effect relationships to deal with problems and situations to be solved through innovative practices

**MINIMUM CREDIT REQUIREMENTS OF THE DIFFERENT PATHWAYS
IN THE THREE-YEAR PROGRAMME IN CUFYUGP**

Sl. No	Academic Pathway	Major	Minor/ Other Disciplines	Foundation Courses AEC: 4 MDC: 3 SEC: 3 VAC: 3	Intern -ship	Total Credits	Example
		Each course has 4 credits		Each course has 3 credits			
1	Single Major (A)	68 (17 courses)	24 (6 courses)	39 (13 courses)	2	133	Major: Economics + six courses in different disciplines in different combinations
2	Major (A) with Multiple Disciplines (B, C)	68 (17 courses)	12 + 12 (3 + 3 = 6 courses)	39 (13 courses)	2	133	Major: Economics + History and Political Science
3	Major (A) with Minor (B)	68 (17 courses)	24 (6 courses)	39 (13 courses)	2	133	Major: Economics Minor: History
4	Major (A) with Vocational Minor (B)	68 (17 courses)	24 (6 courses)	39 (13 courses)	2	133	Major: Economics Minor: Taxation Practices and Procedures
5	Double Major (A, B)	A: 48 (12 courses) B: 44 (11 courses)	- The 24 credits in the Minor stream are distributed between the two Majors. 2 MDC, 2 SEC, 2 VAC and the Internship should be in Major A. Total credits in Major A should be 48 + 20 = 68 (50% of 133)	12 + 18 + 9	2	133	Economics and Mathematics double major

			1 MDC, 1 SEC and 1 VAC should be in Major B. Total credits in Major B should be $44 + 9 = 53$ (40% of 133)		
Exit with UG Degree / Proceed to Fourth Year with 133 Credits					

B.A. ECONOMICS HONOURS PROGRAMME

COURSE STRUCTURE FOR PATHWAYS 1 – 4

1. Single Major

2. Major with Multiple Disciplines

3. Major with Minor

4. Major with Vocational Minor

Semester	Course Code	Course Title	Total Hours	Hours/Week	Credits	Marks			
						Internal	External	Total	
1	ECO1CJ 101/ ECO1MN 100	Core Course 1 in Major – Principles of Economics	75	5	4	30	70	100	
		Minor Course 1	60/75	4/5	4	30	70	100	
		Minor Course 2	60/75	4/5	4	30	70	100	
		ENG1FA 101(1B)	Ability Enhancement Course 1 – English	60	4	3	25	50	75
			Ability Enhancement Course 2 – Additional Language	45	3	3	25	50	75
			Multi-Disciplinary Course 1 – Other than Major	45	3	3	25	50	75
			Total		23/25	21			525
2	ECO2CJ 102/ ECO2MN 100	Core Course 2 in Major – Budget Analysis	75	5	4	30	70	100	
		Minor Course 3	60/75	4/5	4	30	70	100	
		Minor Course 4	60/75	4/5	4	30	70	100	
		ENG2FA 103(1B)	Ability Enhancement Course 3 – English	60	4	3	25	50	75
			Ability Enhancement Course 4 – Additional Language	45	3	3	25	50	75
			Multi-Disciplinary Course 2 – Other than Major	45	3	3	25	50	75
			Total		23/25	21			525

Seme ster	Course Code	Course Title	Total Hours	Hours/ Week	Credits	Marks		
						Inter nal	Exter nal	Total
3	ECO3CJ 201	Core Course 3 in Major – Analytical Tools for Economics – I	60	4	4	30	70	100
	ECO3CJ 202/ ECO3MN 200	Core Course 4 in Major – Evolution of Economic Theories	60	4	4	30	70	100
		Minor Course 5	60/ 75	4/ 5	4	30	70	100
		Minor Course 6	60/ 75	4/ 5	4	30	70	100
		Multi-Disciplinary Course 3 – Kerala Knowledge System	45	3	3	25	50	75
	ENG3FV 108(1B)	Value-Added Course 1 – English	45	3	3	25	50	75
		Total		22/ 24	22			550
4	ECO4CJ 203	Core Course 5 in Major – Intermediate Microeconomics	60	4	4	30	70	100
	ECO4CJ 204	Core Course 6 in Major – Intermediate Macroeconomics	60	4	4	30	70	100
	ECO4CJ 205	Core Course 7 in Major – Analytical Tools for Economics – II	60	4	4	30	70	100
	ENG4FV 109(1B)	Value-Added Course 2 – English	45	3	3	25	50	75
		Value-Added Course 3 – Additional Language	45	3	3	25	50	75
	ENG4FS 111(1B)	Skill Enhancement Course 1 – English	60	4	3	25	50	75
		Total		22	21			525
5	ECO5CJ 301	Core Course 8 in Major – Advanced Microeconomics	60	4	4	30	70	100
	ECO5CJ 302	Core Course 9 in Major – International Trade Theories	60	4	4	30	70	100
	ECO5CJ 303	Core Course 10 in Major – Growth Theories in Economics	60	4	4	30	70	100
		Elective Course 1 in Major	60	4	4	30	70	100
		Elective Course 2 in Major	60	4	4	30	70	100
		Skill Enhancement Course 2	45	3	3	25	50	75
		Total		23	23			575

Seme ster	Course Code	Course Title	Total Hours	Hours/ Week	Credits	Marks		
						Inter nal	Exter nal	Total
6	ECO6CJ 304/ ECO 8MN304	Core Course 11 in Major – Development Issues in Indian Economy	60	4	4	30	70	100
	ECO6CJ 305/ ECO8MN 305	Core Course 12 in Major – Elementary Econometrics	75	5	4	30	70	100
	ECO6CJ 306/ ECO8MN 306	Core Course 13 in Major – Advanced Macroeconomics	60	4	4	30	70	100
		Elective Course 3 in Major	60	4	4	30	70	100
		Elective Course 4 in Major	60	4	4	30	70	100
	ECO6FS 113	Skill Enhancement Course 3 – Economic Research with R	45	3	3	25	50	75
	ECO6CJ 349	Internship in Major (Credit for internship to be awarded only at the end of Semester 6)	60		2	50	-	50
		Total		24	25			625
Total Credits for Three Years					133			3325
7	ECO7CJ 401	Core Course 14 in Major – Time Series Econometrics	75	5	4	30	70	100
	ECO7CJ 402	Core Course 15 in Major – Game Theory and Economic Behaviour	75	5	4	30	70	100
	ECO7CJ 403	Core Course 16 in Major – Development Theories and Models	75	5	4	30	70	100
	ECO7CJ 404	Core Course 17 in Major – Balance of Payments and Exchange Market	75	5	4	30	70	100
	ECO7CJ 405	Core Course 18 in Major – Development Issues in Kerala	75	5	4	30	70	100
		Total		25	20			500
8	ECO8CJ 406 / ECO8MN 406	Core Course 19 in Major – Macroeconomic Models and Measurement	75	5	4	30	70	100

Seme ster	Course Code	Course Title	Total Hours	Hours/ Week	Credits	Marks		
						Inter nal	Exter nal	Total
	ECO8CJ 407 / ECO8MN 407	Core Course 20 in Major – Applied Microeconomics and Evaluation	60	4	4	30	70	100
	ECO8CJ 408 / ECO8MN 408	Core Course 21 in Major – Heterodox Economics	60	4	4	30	70	100
OR (instead of Core Courses 19 – 21 in Major)								
	ECO8CJ 449	Project (in Honours programme)	360*	13*	12	90	210	300
	ECO8CJ 499	Project (in Honours with Research programme)	360*	13*	12	90	210	300
		Elective Course 5 in Major / Minor Course 7	60	4	4	30	70	100
		Elective Course 6 in Major / Minor Course 8	60	4	4	30	70	100
		Elective Course 7 in Major / Minor Course 9 / Major Course in any Other Discipline	60	4	4	30	70	100
OR (instead of Elective Course 7 in Major, in the case of Honours with Research Programme)								
	ECO8CJ 489 (1)/ ECO8CJ 489 (2)	Methods for Quantitative Research in Economics/ Methods for Qualitative Research in Economics	60	4	4	30	70	100
		Total		25	24			600
Total Credits for Four Years					177			4425

* The teacher should have 13 hrs/week of engagement (the hours corresponding to the three core courses) in the guidance of the Project(s) in Honours programme and Honours with Research programme, while each student should have 24 hrs/week of engagement in the Project work. Total hours are given based on the student's engagement.

CREDIT DISTRIBUTION FOR PATHWAYS 1 – 4

- | | |
|---------------------|------------------------------------|
| 1. Single Major | 2. Major with Multiple Disciplines |
| 3. Major with Minor | 4. Major with Vocational Minor |

Semester	Major Courses	Minor Courses	General Foundation Courses	Internship/ Project	Total
1	4	4 + 4	3 + 3 + 3	-	21
2	4	4 + 4	3 + 3 + 3	-	21
3	4 + 4	4 + 4	3 + 3	-	22
4	4 + 4 + 4	-	3 + 3 + 3	-	21
5	4 + 4 + 4 + 4 + 4	-	3	-	23
6	4 + 4 + 4 + 4 + 4	-	3	2	25
Total for Three Years	68	24	39	2	133
7	4 + 4 + 4 + 4 + 4	-	-	-	20
8	4 + 4 + 4	4 + 4 + 4	-	12*	24
* Instead of three Major courses					
Total for Four Years	88 + 12 = 100	36	39	2	177

DISTRIBUTION OF MAJOR COURSES IN ECONOMICS FOR PATHWAYS 1 – 4

- | | |
|---------------------|------------------------------------|
| 1. Single Major | 2. Major with Multiple Disciplines |
| 3. Major with Minor | 4. Major with Vocational Minor |

Semester	Course Code	Course Title	Hours/ Week	Credits
1	ECO1CJ 101 / ECO1MN 100	Core Course 1 in Major – Principles of Economics	5	4
2	ECO2CJ 102 / ECO2MN 100	Core Course 2 in Major – Budget Analysis	5	4
3	ECO3CJ 201	Core Course 3 in Major – Analytical Tools for Economics – I	4	4

	ECO3CJ 202 / ECO3MN 200	Core Course 4 in Major – Evolution of Economic Theories	4	4
4	ECO4CJ 203	Core Course 5 in Major – Intermediate Microeconomics	4	4
	ECO4CJ 204	Core Course 6 in Major – Intermediate Macroeconomics	4	4
	ECO4CJ 205	Core Course 7 in Major – Analytical Tools for Economics – II	4	4
5	ECO5CJ 301	Core Course 8 in Major – Advanced Microeconomics	4	4
	ECO5CJ 302	Core Course 9 in Major – International Trade Theories	4	4
	ECO5CJ 303	Core Course 10 in Major – Growth Theories in Economics	4	4
		Elective Course 1 in Major	4	4
		Elective Course 2 in Major	4	4
6	ECO6CJ 304 / ECO8MN 304	Core Course 11 in Major – Development Issues in Indian Economy	4	4
	ECO6CJ 305 / ECO8MN 305	Core Course 12 in Major – Elementary Econometrics	5	4
	ECO6CJ 306 / ECO8MN 306	Core Course 13 in Major – Advanced Macroeconomics	4	4
		Elective Course 3 in Major	4	4
		Elective Course 4 in Major	4	4
	ECO6CJ 349	Internship in Major	-	2
	Total for the Three Years			
7	ECO7CJ 401	Core Course 14 in Major – Time Series Econometrics	5	4
	ECO7CJ 402	Core Course 15 in Major – Game Theory and Economic Behaviour	5	4
	ECO7CJ 403	Core Course 16 in Major – Development Theories and Models	5	4

	ECO7CJ 404	Core Course 17 in Major – Balance of Payments and Exchange Market	5	4
	ECO7CJ 405	Core Course 18 in Major – Development Issues in Kerala	5	4
8	ECO8CJ 406 / ECO8MN 406	Core Course 19 in Major – Macroeconomic Models and Measurement	5	4
	ECO8CJ 407 / ECO8MN 407	Core Course 20 in Major – Applied Microeconomics and Evaluation	4	4
	ECO8CJ 408 / ECO8MN 408	Core Course 21 in Major – Heterodox Economics	4	4
	OR (instead of Core Courses 19 – 21 in Major)			
	ECO8CJ 449	Project (in Honours programme)	13	12
	ECO8CJ 499	Project (in Honours with Research programme)	13	12
		Elective Course 5 in Major	4	4
		Elective Course 6 in Major	4	4
		Elective Course 7 in Major	4	4
	OR (instead of Elective course 7 in Major, in Honours with Research programme)			
	ECO8CJ 489 (1)/ ECO8CJ 489 (2)	Methods for Quantitative Research in Economics/ Methods for Qualitative Research in Economics	4	4
Total for the Four Years				114

ELECTIVE COURSES IN ECONOMICS

Sl. No.	Course Code	Title	Semester	Total Hrs	Hrs/Week	Credits	Marks		
							Internal	External	Total
1	ECO5EJ301	Gender Analysis in Economics	5	60	4	4	30	70	100
2	ECO5EJ302	Environment and Sustainable Development	5	60	4	4	30	70	100
3	ECO5EJ303	Economic Database Management	5	60	4	4	30	70	100
4	ECO5EJ304	Economics of Labour Market	5	60	4	4	30	70	100
5	ECO5EJ305	Health Economics	5	60	4	4	30	70	100
6	ECO5EJ306	Human Capital and Economic Development	5	60	4	4	30	70	100
7	ECO6EJ307	Industrial Economics	6	60	4	4	30	70	100
8	ECO6EJ308	Agricultural Economics	6	60	4	4	30	70	100
9	ECO6EJ309	Indian Financial Market	6	60	4	4	30	70	100
10	ECO6EJ310	Demography	6	60	4	4	30	70	100
11	ECO6EJ311	Basic Methods for Economic Research	6	60	4	4	30	70	100
12	ECO6EJ312	Economic Geography	6	60	4	4	30	70	100
13	ECO8EJ401	Social Choice Theory	8	60	4	4	30	70	100
14	ECO8EJ402	Banking and Insurance	8	60	4	4	30	70	100
15	ECO8EJ403	Economics of Education	8	60	4	4	30	70	100
16	ECO8EJ404	Law and Economics	8	60	4	4	30	70	100
17	ECO8EJ405	Local Level Planning	8	60	4	4	30	70	100
18	ECO8EJ406	Finance and Technology	8	60	4	4	30	70	100

GROUPING OF MINOR COURSES IN ECONOMICS

(The minor courses given below should not be offered to students who have taken Economics as the major discipline, except in the case of Multiple Discipline pathway. In case of multiple discipline pathway, a maximum of one group (three courses) can be opted as one of the subjects of study by students with Economics as major. Students in Major (other than Economics) with Minor pathway can choose all the courses from any two Minor groups.)

(Title of the Minor: **ECONOMICS**)

Group No.	Sl. No.	Course Code	Title	Semester	Total Hrs	Hrs/Week	Credits	Marks		
								Internal	External	Total
1	FISCAL POLICY IN PRACTICE									
	1	ECO1MN 101	Fiscal Tools for Policy Formulation	1	60	4	4	30	70	100
	2	ECO2MN 101	Fiscal Policy and Stabilization	2	60	4	4	30	70	100
	3	ECO3MN 201	Tax Policy in India	3	60	4	4	30	70	100
2	MONETARY POLICY IN PRACTICE									
	1	ECO1MN 102	Monetary Tools for Policy Formulation	1	60	4	4	30	70	100
	2	ECO2MN 102	Monetary Policy and Stabilization	2	60	4	4	30	70	100
	3	ECO3MN 202	Monetary Policy in India	3	60	4	4	30	70	100
3	SECTORAL DYNAMICS IN INDIAN ECONOMY									
	1	ECO1MN 103	Sectoral contributions in Indian Economy	1	60	4	4	30	70	100
	2	ECO2MN 103	Industrial Policies in India	2	60	4	4	30	70	100
	3	ECO3MN 203	Agricultural Development in India	3	60	4	4	30	70	100
4	INDIAN ECONOMIC DEVELOPMENT									
	1	ECO1MN 104	Development issues in Indian Economy	1	60	4	4	30	70	100
	2	ECO2MN 104	Trade Policy in India	2	60	4	4	30	70	100
	3	ECO3MN 204	Knowledge Economy in India	3	60	4	4	30	70	100

GROUPING OF VOCATIONAL MINOR COURSES IN ECONOMICS

(The vocational minor courses given below should not be offered to students who have taken Economics as the major discipline, except in the case of Multiple Discipline pathway. In case of multiple discipline pathway, a maximum of one group (three courses) can be opted as one of the subjects of study by students with Economics as major. Students in Major (other than Economics) with Vocational Minor pathway can choose all the courses from any two Vocational Minor groups.)

(Title of the Vocational Minor: **Economics**)

Group No.	Sl. No.	Course Code	Title	Semester	Total Hrs	Hrs/Week	Credits	Marks		
								Internal	External	Total
1	Income Tax Practices									
	1	ECO1VN 101	Basics of Income Tax	1	60	4	4	30	70	100
	2	ECO2VN 101	Calculation of Income for Taxation	2	60	4	4	30	70	100
	3	ECO3VN 201	Income Tax Assessment	3	60	4	4	30	70	100
	4	ECO8VN 301	Income Tax Laws, Procedures and Authorities	8	60	4	4	30	70	100
2	GST Practices									
	1	ECO1VN 102	Foundations of GST	1	60	4	4	30	70	100
	2	ECO2VN 102	GST Compliance	2	60	4	4	30	70	100
	3	ECO3VN 202	GST Audit and Investigation Techniques	3	60	4	4	30	70	100
	4	ECO8VN 302	Advanced Topics in GST: Anti-Evasion Measures and Case Studies	8	60	4	4	30	70	100
3	Advanced Data Analysis in Economics									
	1	ECO1VN 103	Fundamentals of Data Science in Economics	1	60	4	4	30	70	100
	2	ECO2VN 103	Cross Section Data Analysis in Economics	2	60	4	4	30	70	100
	3	ECO3VN 203	Time Series Data Analysis in Economics	3	60	4	4	30	70	100

	4	ECO8VN 303	Panel Data Analysis in Economics	8	60	4	4	30	70	100
Applied Data Science Techniques in Economics										
4	1	ECO1VN 104	Applied Econometrics and Data Mining	1	60	4	4	30	70	100
	2	ECO2VN 104	Big Data Applications in Economics	2	60	4	4	30	70	100
	3	ECO3VN 204	Economic Data Visualisation and Storytelling	3	60	4	4	30	70	100
	4	ECO8VN 304	Machine Learning in Economics	8	60	4	4	30	70	100

- I. Students in Single Major pathway can choose course/courses from any of the Minor/ Vocational Minor groups offered by a discipline other than their Major discipline.
- II. Students in Major with Multiple Disciplines pathway can choose as one of the multiple disciplines, all the three courses from any one of the Minor/ Vocational Minor groups offered by any discipline, including their Major discipline. If they choose one of the Minor/ Vocational Minor groups offered by their Major discipline as the first one of the multiple disciplines, then their choice as the second one of the multiple disciplines should be any one of the Minor/ Vocational Minor groups offered by a discipline other than the Major discipline. If the students with major Economics choose any one of the Minor/ Vocational Minor groups in Economics as given above, then the title of the group will be the title of that multiple discipline. If the students with major other than Economics choose any two Minor groups in Economics as given above, then the title of the Minor will be **Economics**
- III. Students in Major with Minor pathway can choose all the courses from any two Minor groups offered by any discipline other than major discipline. If the students with major other than Economics choose any two Minor groups in Economics as given above, then the title of the Minor will be **Economics**. Students in Major Economics with Minor pathway cannot choose all the courses from the Minor groups of Economics. But students with major Economics opting minor pathway can choose all the courses from two groups of Quantitative Economics (given below).
- IV. Students in Major with Vocational Minor pathway can choose all the courses from any two Vocational Minor groups offered by any discipline. If the students choose any two Vocational Minor groups from Economics as given above, then the title of the Vocational Minor will be **Economics**.

GROUPING OF MINOR COURSES IN QUANTITATIVE ECONOMICS

*(These two groups of minor courses may be taken by major students in Economics. If they take both the groups given below, then the name of the minor program is **QUANTITATIVE ECONOMICS**)*

(Title of the Minor: **QUANTITATIVE ECONOMICS**)

Group No.	Sl. No.	Course Code	Title	Sem ester	Total Hrs	Hrs/ Week	Cre dits	Marks		
								Inte rnal	Exte rnal	Total
1	Basic Quantitative Techniques for Economics									
	1	ECO1MN 105	Quantitative Techniques for Economic Analysis I	1	60	4	4	30	70	100
	2	ECO2MN 105	Quantitative Techniques for Economic Analysis II	2	60	4	4	30	70	100
	3	ECO3MN 205	Quantitative Techniques for Economic Analysis III	3	60	4	4	30	70	100
	4	ECO8MN 305	Quantitative Techniques for Economic Analysis IV	8	60	4	4	30	70	100
2	Elementary Tools for Economic Data Analysis									
	1	ECO1MN 106	Elementary Tools for Economic Data Analysis I	1	60	4	4	30	70	100
	2	ECO2MN 106	Elementary Tools for Economic Data Analysis II	2	60	4	4	30	70	100
	3	ECO3MN 206	Elementary Tools for Economic Data Analysis III	3	60	4	4	30	70	100
	4	ECO8MN 306	Elementary Tools for Economic Data Analysis IV	8	60	4	4	30	70	100

Quantitative economics is a specialized field that focuses on the application of mathematical and statistical techniques to analyze economic phenomena and solve economic problems. Its significance and career prospects are noteworthy due to the increasing reliance on data-driven decision-making across various sectors. Quantitative economics plays a key role in government agencies, policy analysts evaluate the potential economic impact of proposed legislation and policies. They use statistical analysis to predict outcomes and assess the effectiveness of current policies. Quantitative economics has extensive real-world applications, making it a valuable field of study with diverse career prospects. Professionals in this field are equipped with the analytical tools and quantitative skills needed to tackle complex economic issues across various industries, including finance, consulting, government, academia, international organizations, and the tech industry. The ability to apply rigorous quantitative methods to real-world problems ensures that quantitative economists remain in high demand and are well-prepared to make significant contributions in their chosen careers.

DISTRIBUTION OF GENERAL FOUNDATION COURSES IN ECONOMICS

Sem ester	Course Code	Course Title	Total Hours	Hours/ Week	Credits	Marks		
						Internal	External	Total
1	ECO1FM105	Multi-Disciplinary Course 1 – Security Trading Practices	45	3	3	25	50	75
2	ECO2FM106	Multi-Disciplinary Course 2 – Digital Economy	45	3	3	25	50	75
3	ECO3FV108	Value-Added Course 1 – Financial Literacy and Personal Finance	45	3	3	25	50	75
4	ECO4FV110	Value-Added Course 2 – Digital Marketing and E-Commerce Strategies	45	3	3	25	50	75
5	ECO5FS112	Skill Enhancement Course 2 – Big Data Analysis in Economics	45	3	3	25	50	75
6	ECO6FS113	Skill Enhancement Course 3 – Economic Research with R	45	3	3	25	50	75

**COURSE STRUCTURE FOR BATCH A1(B2)
IN PATHWAY 5: DOUBLE MAJOR**

A1: 68 credits in Economics (Major A)

B1: 68 credits in Major B

A2: 53 credits in Economics (Major A)

B2: 53 credits in Major B

The combinations available to the students: (A1 & B2), (B1 & A2)

Note: Unless the batch is specified, the course is for all the students of the class

Semester	Course Code	Course Title	Total Hours	Hours/Week	Credits	Marks		
						Internal	External	Total
1	ECO1CJ 101 / ECO1MN 100	Core Course 1 in Major Economics – Principles of Economics	75	5	4	30	70	100
	BBB1CJ 101	Core Course 1 in Major B –	60/ 75	4/ 5	4	30	70	100
	ECO1CJ 102 / ECO2CJ 102* / ECO2M N100*	Core Course 2 in Major Economics – Budget Analysis (for batch A1 only)	75	5	4	30	70	100
	ENG1F A 101(1B)	Ability Enhancement Course 1 – English	60	4	3	25	50	75
		Ability Enhancement Course 2 – Additional Language	45	3	3	25	50	75
	ECO1FM 105	Multi-Disciplinary Course 1 in Economics – Security Trading Practices (for batch A1 only)	45	3	3	25	50	75
		Total		24/ 25	21			525
2	ECO2CJ 101 / ECO3CJ 201*	Core Course 3 in Major Economics – Analytical Tools for Economics – I	60	4	4	30	70	100
	BBB2CJ 101	Core Course 2 in Major B –	60/ 75	4/ 5	4	30	70	100
	BBB2CJ 102 / BBB1CJ 102	Core Course 3 in Major B – (for batch B2 only)	60/ 75	4/ 5	4	30	70	100

	ENG2F A 103(1B)	Ability Enhancement Course 3 – English	60	4	3	25	50	75
		Ability Enhancement Course 4 – Additional Language	45	3	3	25	50	75
	ECO2FM 106	Multi-Disciplinary Course 2 in Economics – Digital Economy	45	3	3	25	50	75
		Total		22/24	21			525
3	ECO3CJ 202 / ECO3MN 200	Core Course 4 in Major Economics – Evolution of Economic Theories	60	4	4	30	70	100
	ECO3CJ 203 / ECO4CJ 203*	Core Course 5 in Major Economics – Intermediate Microeconomics	60	4	4	30	70	100
	BBB3CJ 201	Core Course 4 in Major B	60/ 75	4/ 5	4	30	70	100
	BBB3CJ 202	Core Course 5 in Major B	60/ 75	4/ 5	4	30	70	100
	BBB3F M 106 / BBB2F M 106	Multi-Disciplinary Course 1 in B –	45	3	3	25	50	75
	ECO3FV 108	Value-Added Course 1 in Economics – Financial Literacy and Personal Finance (for batch A1 only)	45	3	3	25	50	75
		Total		22/24	22			550
4	ECO4CJ 204	Core Course 6 in Major Economics – Intermediate Macroeconomics	60	4	4	30	70	100
		Core Course 6 in Major B	60/ 75	4/ 5	4	30	70	100
	ECO4CJ 205	Core Course 7 in Major Economics – Analytical Tools for Economics – II (for batch A1 only)	60	4	4	30	70	100
	ECO4FV 110	Value-Added Course 2 in Economics – Digital Marketing and E-Commerce Strategies	45	3	3	25	50	75

	BBB4F V 110	Value-Added Course 1 in B –	45	3	3	25	50	75
	ECO4FS 112 / ECO5FS 112*	Skill Enhancement Course 1 in Economics – Big Data Analysis in Economics	45	3	3	25	50	75
		Total		21/ 22	21			525
5	ECO5CJ 302	Core Course 8 in Major Economics – International Trade Theories	60	4	4	30	70	100
		Core Course 7 in Major B –	60/ 75	4/ 5	4	30	70	100
	ECO5CJ 303	Core Course 9 in Major Economics – Growth Theories in Economics (for batch A1 only)	60	4	4	30	70	100
		Elective Course 1 in Major Economics	60	4	4	30	70	100
		Elective Course 1 in Major B	60	4	4	30	70	100
	BBB5F S 112 / BBB4F S 112	Skill Enhancement Course 1 in B	45	3	3	25	50	75
		Total		23/ 24	23			575
6	ECO6CJ 304 / ECO8M N304	Core Course 10 in Major Economics – Development Issues in Indian Economy	60	4	4	30	70	100
		Core Course 8 in Major B –	60/ 75	4/ 5	4	30	70	100
	BBB6CJ 305	Core Course 9 in Major B – (for batch B2 only)	60	4	4	30	70	100
		Elective Course 2 in Major Economics	60	4	4	30	70	100
		Elective Course 2 in Major B	60	4	4	30	70	100
	ECO6FS 113	Skill Enhancement Course 2 in Economics – Economic Research with R (for batch A1 only)	45	3	3	25	50	75

	ECO6CJ 349	Internship in Major Economics (Credit for internship to be awarded only at the end of Semester 6)	60		2	50	-	50
		Total		23/ 24	25			625
Total Credits for Three Years					133			3325
For batch A1(B2), the course structure in semesters 7 and 8 is the same as for pathways 1 – 4, except that the number of the core and elective courses is in continuation of the number of courses in the two categories completed at the end of semester 6.								

*The course code of the same course as used for the pathways 1 – 4

CREDIT DISTRIBUTION FOR BATCH A1(B2) IN PATHWAY 5: DOUBLE MAJOR

Semester	Major Courses in Economics	General Foundation Courses in Economics	Internship/ Project in Economics	Major Courses in B	General Foundation Courses in B	AEC	Total
1	4 + 4	3	-	4	-	3 + 3	21
2	4	3	-	4 + 4	-	3 + 3	21
3	4 + 4	3	-	4 + 4	3	-	22
4	4 + 4	3 + 3	-	4	3	-	21
5	4 + 4 + 4	-	-	4 + 4	3	-	23
6	4 + 4	3	2	4 + 4 + 4	-	-	25
Total for Three Years	48	18	2	44	9	12	133
		68		53		12	133
	Major Courses in Economics	Minor Courses					
7	4 + 4 + 4 + 4 + 4	-			-	-	20
8	4 + 4 + 4	4 + 4 + 4	12*		-	-	24
* Instead of three Major courses							
Total for Four Years	88 + 12 = 100	12					177

**COURSE STRUCTURE FOR BATCH B1(A2)
IN PATHWAY 5: DOUBLE MAJOR**

A1: 68 credits in Economics (Major A)

B1: 68 credits in Major B

A2: 53 credits in Economics (Major A)

B2: 53 credits in Major B

The combinations available to the students: (A1 & B2), (B1 & A2)

Note: Unless the batch is specified, the course is for all the students of the class

Semester	Course Code	Course Title	Total Hours	Hours/Week	Credits	Marks		
						Internal	External	Total
1	ECO1CJ 101 / ECO1MN 100	Core Course 1 in Major Economics – Principles of Economics	75	5	4	30	70	100
	BBB1CJ 101	Core Course 1 in Major B –	60/ 75	4/ 5	4	30	70	100
	BBB1CJ 102 / BBB2CJ 102	Core Course 2 in Major B – (for batch B1 only)	60/ 75	4/ 5	4	30	70	100
	ENG1F A 101(1B)	Ability Enhancement Course 1 – English	60	4	3	25	50	75
		Ability Enhancement Course 2 – Additional Language	45	3	3	25	50	75
	BBB1F M 105	Multi-Disciplinary Course 1 in B – (for batch B1 only)	45	3	3	25	50	75
		Total		23 /25	21			525
2	ECO2CJ 101 / ECO3CJ 201*	Core Course 2 in Major Economics – Analytical Tools for Economics – I	60	4	4	30	70	100
	BBB2CJ 101	Core Course 3 in Major B –	60/ 75	4/ 5	4	30	70	100
	ECO2CJ 102 / ECO2MN 100	Core Course 3 in Major Economics – Budget Analysis (for batch A2 only)	75	5	4	30	70	100

	ENG2F A 103(1B)	Ability Enhancement Course 3 – English	60	4	3	25	50	75
		Ability Enhancement Course 4 – Additional Language	45	3	3	25	50	75
	ECO2FM 106	Multi-Disciplinary Course 1 in Economics – Digital Economy	45	3	3	25	50	75
		Total		23/ 24	21			525
3	ECO3CJ 202 / ECO3MN 200	Core Course 4 in Major Economics – Evolution of Economic Theories	60	4	4	30	70	100
	ECO3CJ 203 / ECO4CJ 203*	Core Course 5 in Major Economics – Intermediate Microeconomics	60	4	4	30	70	100
	BBB3CJ 201	Core Course 4 in Major B	60/ 75	4/ 5	4	30	70	100
	BBB3CJ 202	Core Course 5 in Major B	60/ 75	4/ 5	4	30	70	100
	BBB3FM 106 / BBB2FM 106	Multi-Disciplinary Course 2 in B –	45	3	3	25	50	75
	BBB3FV 108	Value-Added Course 1 in B – (for batch B1 only)	45	3	3	25	50	75
		Total		22/24	22			550
4	ECO4CJ 204	Core Course 6 in Major Economics – Intermediate Macroeconomics	60	4	4	30	70	100
		Core Course 6 in Major B	60/ 75	4/ 5	4	30	70	100
		Core Course 7 in Major B – (for batch B1 only)	60/ 75	4/ 5	4	30	70	100
	ECO4FV 110	Value-Added Course 1 in Economics – Digital Marketing and E-Commerce Strategies	45	3	3	25	50	75
	BBB4F V 110	Value-Added Course 2 in B –	45	3	3	25	50	75

	ECO4FS 112 / ECO5FS 112*	Skill Enhancement Course 1 in Economics – Big Data Analysis in Economics	45	3	3	25	50	75
		Total		21/23	21			525
5	ECO5CJ 301	Core Course 7 in Major Economics – Advanced Microeconomics	60	4	4	30	70	100
		Core Course 8 in Major B –	60/ 75	4/ 5	4	30	70	100
		Core Course 9 in Major B – (for batch B1 only)	60	4	4	30	70	100
		Elective Course 1 in Major Economics	60	4	4	30	70	100
		Elective Course 1 in Major B	60	4	4	30	70	100
	BBB5FS 112 / BBB4FS 112	Skill Enhancement Course 1 in B	45	3	3	25	50	75
		Total		23/ 24	23			575
6	ECO6CJ 304 / ECO8M N304	Core Course 8 in Major Economics – Development Issues in Indian Economy	60	4	4	30	70	100
		Core Course 10 in Major B –	60/ 75	4/ 5	4	30	70	100
	ECO6CJ 306 / ECO8MN 306	Core Course 9 in Major Economics – Advanced Macroeconomics (for batch A2 only)	60	4	4	30	70	100
		Elective Course 2 in Major Economics	60	4	4	30	70	100
		Elective Course 2 in Major B	60	4	4	30	70	100
	BBB6FS 113	Skill Enhancement Course 2 in B – (for batch B1 only)	45	3	3	25	50	75

	BBB6CJ 349	Internship in Major B (Credit for internship to be awarded only at the end of Semester 6)	60		2	50	-	50
		Total		23/ 24	25			625
Total Credits for Three Years					133			3325
To continue to study Economics in semesters 7 and 8, batch B1(A2) needs to earn additional 15 credits in Economics to make the total credits of 68. Suppose this condition is achieved, and the student of batch B1(A2) proceeds to the next semesters to study Economics. The course structure in semesters 7 and 8 is the same as for pathways 1 – 4, except that the number of the core and elective courses is in continuation of the number of courses in the two categories completed at the end of semester 6, taking into account the number of courses in Economics taken online to earn the additional 15 credits.								

* The course code of the same course as used for the pathways 1 – 4

CREDIT DISTRIBUTION FOR BATCH B1(A2) IN PATHWAY 5: DOUBLE MAJOR

Semester	Major Courses in B	General Foundation Courses in B	Internship/ Project in B	Major Courses in Economics	General Foundation Courses in Economics	AEC	Total
1	4 + 4	3	-	4	-	3 + 3	21
2	4	-	-	4 + 4	3	3 + 3	21
3	4 + 4	3 + 3	-	4 + 4	-	-	22
4	4 + 4	3	-	4	3 + 3	-	21
5	4 + 4 + 4	3	-	4 + 4	-	-	23
6	4 + 4	3	2	4 + 4 + 4	-	-	25
Total for Three Years	48	18	2	44	9	12	133
		68		53		12	133
	Major Courses in B	Minor Courses					
7	4 + 4 + 4 + 4 + 4	-			-	-	20
8	4 + 4 + 4	4 + 4 + 4	12*		-	-	24
* Instead of three Major courses							
Total for Four Years	88 + 12 = 100	12					177

EVALUATION SCHEME

1. The evaluation scheme for each course contains two parts: internal evaluation (about 30%) and external evaluation (about 70%). Each of the Major and Minor courses is of 4-credits. It is evaluated for 100 marks, out of which 30 marks is from internal evaluation and 70 marks, from external evaluation. Each of the General Foundation course is of 3-credits. It is evaluated for 75 marks, out of which 25 marks is from internal evaluation and 50 marks, from external evaluation.
2. The 4-credit courses (Major and Minor courses) are of two types: (i) courses with only theory and (ii) courses with 3-credit theory and 1-credit practical.
 - In 4-credit courses with only theory component, out of the total 5 modules of the syllabus, one open-ended module with 20% content is designed by the faculty member teaching that course, and it is internally evaluated for 10 marks. The internal evaluation of the remaining 4 theory modules is for 20 marks.
 - In 4-credit courses with 3-credit theory and 1-credit practical components, out of the total 5 modules of the syllabus, 4 modules are for theory and the fifth module is for practical. The practical component is internally evaluated for 20 marks. The internal evaluation of the 4 theory modules is for 10 marks.
3. All the 3-credit courses (General Foundational Courses) in Economics are with only theory component. Out of the total 5 modules of the syllabus, one open-ended module with 20% content is designed by the faculty member teaching that course, and it is internally evaluated for 5 marks. The internal evaluation of the remaining 4 theory modules is for 20 marks.
4. The students can write the external examination in Economics either completely in English or in Malayalam.

Sl. No.	Nature of the Course		Internal Evaluation in Marks (about 30% of the total)		External Exam on 4 modules (Marks)	Total Marks
			Open-ended module / Practical	On the other 4 modules		
1	4-credit course	only theory (5 modules)	10	20	70	100
2	4-credit course	Theory (4 modules) + Practical	20	10	70	100
3	3-credit course	only theory (5 modules)	5	20	50	75

1. MAJOR AND MINOR COURSES

1.1. INTERNAL EVALUATION OF THEORY COMPONENT

Sl. No.	Components of Internal Evaluation of Theory Part of a Major / Minor Course	Internal Marks for the Theory Part of a Major / Minor Course of 4-credits			
		Theory Only		Theory + Practical	
		4 Theory Modules	Open-ended Module	4 Theory Modules	Practical
1	Test paper/ Mid-semester Exam	10	4	5	-
2	Seminar/ Viva/ Quiz	6	4	3	-
3	Assignment	4	2	2	-
Total		20	10	10	20*
		30		30	

* Refer the table in section 1.2 for the evaluation of practical component

1.2. EVALUATION OF PRACTICAL COMPONENT

The evaluation of practical component in Major and Minor courses is completely by internal evaluation.

- Continuous evaluation of practical by the teacher-in-charge shall carry a weightage of 50%.
- The end-semester practical examination and viva-voce, and the evaluation of practical records shall be conducted by the teacher in-charge and an internal examiner appointed by the Department Council.
- The process of continuous evaluation of practical courses shall be completed before 10 days from the commencement of the end-semester examination.
- Those who passed in continuous evaluation alone will be permitted to appear for the end-semester examination and viva-voce.

The scheme of continuous evaluation and the end-semester examination and viva-voce of practical component shall be as given below:

Sl. No.	Evaluation of Practical Component of Credit-1 in a Major / Minor Course	Marks for Practical	Weightage
1	Continuous evaluation of practical/ exercise performed in practical classes by the students	10	50%
2	End-semester examination and viva-voce to be conducted by teacher-in-charge along with an additional examiner arranged internally by the Department Council	7	35%

3	Evaluation of the Practical records submitted for the end semester viva-voce examination by the teacher-in-charge and additional examiner	3	15%
Total Marks		20	

1.3. EXTERNAL EVALUATION OF THEORY COMPONENT

External evaluation carries 70% marks. Examinations will be conducted at the end of each semester. Individual questions are evaluated in marks and the total marks are converted into grades by the University based on 10-point grading system (refer section 5).

PATTERN OF QUESTION PAPER FOR MAJOR AND MINOR COURSES

Duration	Type	Total No. of Questions	No. of Questions to be Answered	Marks for Each Question	Ceiling of Marks
2 Hours	Short Answer	10	8 – 10	3	24
	Paragraph/ Problem	8	6 – 8	6	36
	Essay	2	1	10	10
Total Marks					70

2. INTERNSHIP

- All students should undergo Internship of 2-credits during the first six semesters in a firm, industry or organization, or training in labs with faculty and researchers of their own institution or other Higher Educational Institutions (HEIs) or research institutions.
- Internship can be for enhancing the employability of the student or for developing the research aptitude.
- Internship can involve hands-on training on a particular skill/ equipment/ software. It can be a short project on a specific problem or area. Attending seminars or workshops related to an area of learning or skill can be a component of Internship.
- A faculty member/ scientist/ instructor of the respective institution, where the student does the Internship, should be the supervisor of the Internship.

2.1. GUIDELINES FOR INTERNSHIP

1. All students shall undergo Internship or Apprenticeship in a firm, industry or organization, or training in labs with faculty and researchers of their own institution or other Higher Educational Institutions (HEIs) or research institutions.
2. For an internship, one credit of Internship means two-hour engagement per week. Accordingly, in a semester of 15 weeks' duration, two credits in this course is equivalent to 60 hours of engagement.

3. The students involved in the internship may continue their internship subject to the condition that his/her academic credits do not get affected in terms of attendance and other assignments. If the need arises, students may also have an opportunity to make use of summer & winter breaks for extending their learning from internships.
4. The internship aims to impart:
 - The students should have an understanding and ability to develop solutions for real-life problems.
 - The students will be made aware of the research ethics, professional accountability, conduct and will be able to practice the research ethics and appropriate skills in his/her own research work.
 - The student will be able to enhance academic productivity by developing writing and reading skills and can make contributions towards social and economic issues.
 - The intern can possess an attitude and skill of adaptability and flexibility for new challenges at organizational and individual level with a mindset of teamwork and collaborations.
 - To increase the likelihood of securing future employment and to explore and clarify carrier goals.
 - To develop a strong work ethics, time management and professionalism in a professional environment.
5. Role of Internship Coordinator
 - An internship coordinator is a teacher, who will be nominated by the Department Council (DC) for monitoring and supervising the student during the internship duration. This person will be nominated at the start of the academic year for each batch.
 - Internship Supervisor from the host institute should monitor the regularity of the intern at his/her workplace. On the completion of internship, the student should submit the project report in the prescribed format along with internship completion certificate issued by Internship Supervisor/authority from host organization. The project report shall be evaluated by faculty member delegated by the department council.
 - Students can choose following organizations and mentor from HEIs/research organizations/registered industries/registered media organizations/and companies/registered retail service providers/R&D labs and centres. They can also opt Cooperative Organizations/Banking and nonbanking organizations/Insurance companies/Stock Broking Companies/Microfinance Institutions/Other national and international reputed institutions/libraries in HEIs and registered under library council /NGOs/certified farmers/plantations/local self-governing bodies/ outside India experts working at the

international level, Organizations under State Government/Central Government, elected representatives to the parliament/ state assembly. Students can also undertake an internship from national/international reputed institutions through online mode.

6. Guidelines for Internship Report

- The Internship certificate should be certified by the Head of the Institution. It should contain the Name of the Student, Name of the Internship course, Name of the Institute, Type of work done and duration of work (60 hrs).
- Internship Report should contain 3000-5000 words typed in Times New Roman, size 12, 1.5 space, on double sides and neatly soft bound. It should be submitted to the concerned Department before VI Semester university Exam Notification.
- The Internship Report should be in the following structure
 - a) Title page- Title of the Internship, Name and Register Number of the Student, Year, Name of the institute and name of the college and department.
 - b) Declaration
 - c) Certificate signed by the Head of the Institution (Internship Institute)
 - d) Index
 - e) Content Page - Introduction
 - Nature of the work
 - Methodology
 - Outcome of the work
 - Limitations
 - Suggestions

2.2. EVALUATION OF INTERNSHIP

- The evaluation of Internship shall be done internally through continuous assessment mode by a committee internally constituted by the Department Council of the college where the student has enrolled for the UG Honours programme.
- The credits and marks for the Internship will be awarded only at the end of semester 6.
- The scheme of continuous evaluation and the end-semester viva-voce examination based on the submitted report shall be as given below:

Sl. No.	Components of Evaluation of Internship		Marks for Internship 2 Credits	Weightage
1	Continuous evaluation of internship through interim presentations and reports by the committee internally constituted by the Department Council	Acquisition of skill set	10	40%
2		Interim Presentation and Viva-voce	5	
3		Punctuality	5	

4	Report of Institute Visit/ Study Tour	5	10%
5	End-semester viva-voce examination to be conducted by the committee internally constituted by the Department Council	Quality of the work	6
6		Presentation of the work	5
7		Viva-voce	6
8	Evaluation of the day-to-day records, the report of internship supervisor, and final report submitted for the end semester viva-voce examination before the committee internally constituted by the Department Council	8	15%
Total Marks		50	

3. PROJECT

3.1. PROJECT IN HONOURS PROGRAMME

- In Honours programme, the student has the option to do a Project of 12-credits instead of three Core Courses in Major in semester 8.
- The Project can be done in the same institution/ any other higher educational institution (HEI)/ research centre/ training centre.
- The Project in Honours programme can be a short research work or an extended internship or a skill-based training programme.
- A faculty member of the respective institution, where the student does the Project, should be the supervisor of the Project.

3.2. PROJECT IN HONOURS WITH RESEARCH PROGRAMME

- Students who secure 75% marks and above (equivalently, CGPA 7.5 and above) cumulatively in the first six semesters are eligible to get selected to Honours with Research stream in the fourth year.
- A relaxation of 5% in marks (equivalently, a relaxation of 0.5 grade in CGPA) is allowed for those belonging to SC/ ST/ OBC (non-creamy layer)/ Differently-Abled/ Economically Weaker Section (EWS)/ other categories of candidates as per the decision of the UGC from time to time.
- In Honours with Research programme, the student has to do a mandatory Research Project of 12-credits instead of three Core Courses in Major in semester 8.
- The approved research centres of University of Calicut or any other university/ HEI can offer the Honours with Research programme. The departments in the affiliated colleges under University of Calicut, which are not the approved research centres of the University, should get

prior approval from the University to offer the Honours with Research programme. Such departments should have minimum two faculty members with Ph.D., and they should also have the necessary infrastructure to offer Honours with Research programme.

- A faculty member of the University/ College with a Ph.D. degree can supervise the research project of the students who have enrolled for Honours with Research. One such faculty member can supervise maximum five students in Honours with Research stream.
- The maximum intake of the department for Honours with Research programme is fixed by the department based on the number of faculty members eligible for project supervision, and other academic, research, and infrastructural facilities available.
- If a greater number of eligible students are opting for the Honours with Research programme than the number of available seats, then the allotment shall be based on the existing rules of reservations and merits.

3.3. GUIDELINES FOR THE PROJECT IN HONOURS PROGRAMME AND HONOURS WITH RESEARCH PROGRAMME

1. Project can be done in topics related to Economics.
2. Project should be done individually.
3. Project work can be of experimental/ theoretical/ analytical in nature.
4. There should be minimum 240 hrs. of engagement from the student in the Project work in Honours programme.
5. There should be minimum 13 hrs./week of engagement (the hours corresponding to the three core courses in Major in semester 8) from the teacher in the guidance of the Project(s) in Honours programme and Honours with Research programme.
6. The various steps in project works are the following:
 - Wide review of a topic.
 - Investigation on a problem in systematic way using appropriate techniques.
 - Systematic recording of the work.
 - Reporting the results with interpretation in a standard documented form.
 - Presenting the results before the examiners.
7. A hard copy of the report should be kept for reference at the department. A soft copy of the report should be submitted in pdf format for external evaluation well in advance.
8. It is desirable, but not mandatory, to publish the results of the Project in a peer reviewed journal.

9. The project report shall have declaration from the student and certificate from the research supervisor for originality of the work, stating that the work has not been submitted for the award of any other degree/ diploma in the same institution or any other institution.
10. Plagiarism check report has to be incorporated in the project report after the declaration of the student.
11. The project proposal, institution at which the project is being carried out, and the project supervisor should be prior-approved by the Department Council of the college where the student has enrolled for the UG Honours programme.
12. Structure of the Project
 - Cover Page and Front Page
 - a. Title of the project
 - b. Degree for which project is submitted.
 - c. Name of the Candidate & University Register Number
 - d. Name of the College
 - e. Month and year of the project report submission
 - Contents
 - a. Declaration by the student
 - b. Plagiarism check certificate
 - c. Certificate of the supervising teacher countersigned by the head of the department.
 - d. Acknowledgement.
 - e. Table of Contents
 - f. List of Tables
 - g. List of Figures
 - h. Introductory Chapter
 - i. Analysis Chapters
 - j. Concluding Chapter
 - k. Bibliography
 - l. Appendix
 - Contents of the Introductory Chapter
 1. Introduction
 2. Review of literature
 3. Research Gap
 4. Statement of the problem
 5. Significance of the study

6. Scope of the study
 7. Statement of objectives
 8. Hypotheses (optional)
 9. Methodology
 - a. Data sources
 - b. Tools of analysis (quantitative and qualitative)
 - c. Conceptual Framework-Optional (specification of terms and concepts)
 10. Limitations of the study
 11. Chapter outlines.
- Style of Report
1. Report Length: 50 to 70 pages excluding Appendix and Certificates
 2. Alignment: Justify
 3. Font: Times New Roman
 4. Font size: 12
 5. Line spacing: 1.5
 6. Bibliography: APA style

3.4. EVALUATION OF PROJECT

- The evaluation of Project will be conducted at the end of the eighth semester by both internal and external modes.
- The Project in Honours programme as well as that in Honours with Research programme will be evaluated for 300 marks. Out of this, 90 marks is from internal evaluation and 210 marks, from external evaluation.
- The internal evaluation of the Project work shall be done through continuous assessment mode by a committee internally constituted by the Department Council of the college where the student has enrolled for the UG Honours programme. 30% of the weightage shall be given through this mode.
- The remaining 70% shall be awarded by the external examiner appointed by the University.
- The scheme of continuous evaluation and the end-semester viva-voce of the Project shall be as given below:

Components of Evaluation of Project	Marks for the Project (Honours/ Honours with Research)	Weightage
Continuous evaluation of project work through interim presentations and reports by the committee internally constituted by the Department Council	90	30%
End-semester viva-voce examination to be conducted by the external examiner appointed by the university	150	50%
Evaluation of the day-to-day records and project report submitted for the end-semester viva-voce examination conducted by the external examiner	60	20%
Total Marks	300	

INTERNAL EVALUATION OF PROJECT

Sl. No	Components of Evaluation of Project	Marks for the Project (Honours/ Honours with Research)
1	Skill in doing project work	30
2	Interim Presentation and Viva-Voce	20
3	Punctuality and Log book	20
4	Scheme/ Organization of Project Report	20
Total Marks		90

EXTERNAL EVALUATION OF PROJECT

Sl. No	Components of Evaluation of Project	Marks for the Project (Honours/ Honours with Research) 12 credits
1	Content and relevance of the Project, Methodology, Quality of analysis, and Innovations of Research	50
2	Presentation of the Project	50
3	Project Report (typed copy), Log Book and References	60
4	Viva-Voce	50
Total Marks		210

4. GENERAL FOUNDATION COURSES

- All the General Foundation Courses (3-credits) in Economics are with only theory component.

4.1. INTERNAL EVALUATION

Sl. No.	Components of Internal Evaluation of a General Foundation Course in Economics	Internal Marks of a General Foundation Course of 3-credits in Economics	
		4 Theory Modules	Open-ended Module
1	Test paper/ Mid-semester Exam	10	2
2	Seminar/ Viva/ Quiz	6	2
3	Assignment	4	1
Total		20	5
		25	

4.2. EXTERNAL EVALUATION

External evaluation carries about 70% marks. Examinations will be conducted at the end of each semester. Individual questions are evaluated in marks and the total marks are converted into grades by the University based on 10-point grading system (refer section 5).

PATTERN OF QUESTION PAPER FOR GENERAL FOUNDATION COURSES

Duration	Type	Total No. of Questions	No. of Questions to be Answered	Marks for Each Question	Ceiling of Marks
1.5 Hours	Short Answer	10	8 – 10	2	16
	Paragraph/ Problem	5	4 – 5	6	24
	Essay	2	1	10	10
Total Marks					50

5. LETTER GRADES AND GRADE POINTS

- Mark system is followed for evaluating each question.
- For each course in the semester letter grade and grade point are introduced in 10-point indirect grading system as per guidelines given below.
- The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester.
- The Cumulative GPA (CGPA) is based on the grades in all courses taken after joining the programme of study.
- Only the weighted grade point based on marks obtained shall be displayed on the grade card issued to the students.

LETTER GRADES AND GRADE POINTS

Sl. No.	Percentage of Marks (Internal & External Put Together)	Description	Letter Grade	Grade Point	Range of Grade Points	Class
1	95% and above	Outstanding	O	10	9.50 – 10	First Class with Distinction
2	Above 85% and below 95%	Excellent	A+	9	8.50 – 9.49	
3	75% to below 85%	Very Good	A	8	7.50 – 8.49	
4	65% to below 75%	Good	B+	7	6.50 – 7.49	First Class
5	55% to below 65%	Above Average	B	6	5.50 – 6.49	
6	45% to below 55%	Average	C	5	4.50 – 5.49	Second Class
7	35% to below 45% aggregate (internal and external put together) with a minimum of 30% in external valuation	Pass	P	4	3.50 – 4.49	Third Class
8	Below an aggregate of 35% or below 30% in external evaluation	Fail	F	0	0 – 3.49	Fail
9	Not attending the examination	Absent	Ab	0	0	Fail

- When students take audit courses, they will be given Pass (P) or Fail (F) grade without any credits.
- The successful completion of all the courses and capstone components prescribed for the three-year or four-year programme with 'P' grade shall be the minimum requirement for the award of UG Degree or UG Degree Honours or UG Degree Honours with Research, as the case may be.

5.1. COMPUTATION OF SGPA AND CGPA

- The following method shall be used to compute the Semester Grade Point Average (SGPA): The SGPA equals the product of the number of credits (Ci) with the grade points (Gi) scored by a student in each course in a semester, summed over all the courses taken by a student in the semester, and then divided by the total number of credits of all the courses taken by the student in the semester,

$$\text{i.e. SGPA (Si)} = \frac{\sum_i (C_i \times G_i)}{\sum_i (C_i)}$$

where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the ith course in the given semester. Credit Point of a course is the value obtained by multiplying the credit (Ci) of the course by the grade point (Gi) of the course.

$$\text{SGPA} = \frac{\text{Sum of the credit points of all the courses in a semester}}{\text{Total credits in that semester}}$$

ILLUSTRATION – COMPUTATION OF SGPA

Semester	Course	Credit	Letter Grade	Grade point	Credit Point (Credit x Grade)
I	Course 1	3	A	8	3 x 8 = 24
I	Course 2	4	B+	7	4 x 7 = 28
I	Course 3	3	B	6	3 x 6 = 18
I	Course 4	3	O	10	3 x 10 = 30
I	Course 5	3	C	5	3 x 5 = 15
I	Course 6	4	B	6	4 x 6 = 24
	Total	20			139
	SGPA				139/20 = 6.950

- The Cumulative Grade Point Average (CGPA) of the student shall be calculated at the end of a programme. The CGPA of a student determines the overall academic level of the student in a programme and is the criterion for ranking the students.

CGPA for the three-year programme in CUFYUGP shall be calculated by the following formula.

$$\text{CGPA} = \frac{\text{Sum of the credit points of all the courses in six semesters}}{\text{Total credits in six semesters (133)}}$$

CGPA for the four-year programme in CUFYUGP shall be calculated by the following formula.

$$\text{CGPA} = \frac{\text{Sum of the credit points of all the courses in eight semesters}}{\text{Total credits in eight semesters (177)}}$$

- The SGPA and CGPA shall be rounded off to three decimal points and reported in the transcripts.
- Based on the above letter grades, grade points, SGPA and CGPA, the University shall issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

Major Courses in Economics

Programme	B.A. Economics				
Course Title	PRINCIPLES OF ECONOMICS				
Type of Course	Major				
Semester	I				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores important principles, basic theories and models, various economic systems and other fundamental aspects of economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic principles of economics and its real-world applications.	U	C	Instructor-created exams / Quiz
CO2	Develop and practice the skill of thinking like an economist.	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Help the beginning student master the principles essential for understanding the economizing problem, specific economic issues, and policy alternatives.	U	P	Seminar Presentation / Group Discussion
CO4	Understand and apply the economic perspective and reason accurately and objectively about economic matters.	Ap	C	Instructor-created exams / Home Assignments
CO5	Instil in students a fascination with both the functioning of the economy and the power and breadth of economics	U	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Basic Principles of Economics		10	15
	How People Make Decisions			
	1	People Face Trade-Offs	1	
	2	The Cost of Something Is What You Give	1	
	3	Rational People Think at the Margin	1	
	4	People Respond to Incentives	1	
	How People Interact			
	5	Trade Can Make Everyone Better Off	1	
	6	Markets Are Usually a Good Way to Organize Economic Activity	1	
	7	Governments Can Sometimes Improve Market Outcomes	1	
	How the Economy as a Whole Works			
	8	A Country's Standard of Living Depends on its Ability to Produce Goods and Services	1	
9	Prices Rise When the Government Prints Too Much Money	1		
10	Society Faces a Short-Run Trade-Off between Inflation and Unemployment	1		
II	Thinking like an Economist		10	15
	11	The Economist as Scientist: The Scientific Method: Observation, Theory, and More Observation, The Role of Assumptions, Economic Models, The Circular-Flow Diagram, The Production Possibilities Frontier, Microeconomics and Macroeconomics;	4	
	12	The Economist as Policy Adviser: Positive versus Normative Analysis, Why Economists' Advice Is Not Always Followed;	3	
	13	Why Economists Disagree: Differences in Scientific Judgments, Differences in Values, Perception versus Reality	3	
III	Limits, Alternatives, and Choices		10	15
	14	The Economic Perspective: Scarcity and Choice, Purposeful Behaviour, Marginal Analysis: Comparing Benefits and Costs	3	
	15	Individual's Economizing Problem	2	
	16	Society's Economizing Problem	2	
	17	Unemployment, Growth, and the Future: A Growing Economy, Present Choices and Future Possibilities, A Qualification: International Trade	3	
IV	The Market System		15	25
	18	Economic Systems: Laissez-Faire Capitalism, The Command System, The Market System	4	
	19	Characteristics of the Market System: Private Property, Freedom of Enterprise and Choice, Self-Interest, Competition, Markets and Prices, Technology and Capital Goods, Specialization, Use of Money, Active but Limited Government		
	20	Five Fundamental Questions: What Will Be Produced? How Will the Goods and Services Be Produced? Who Will	4	

		Get the Output? How Will the System Accommodate Change? How Will the System Promote Progress?		
	21	The “Invisible Hand” : The Demise of the Command Systems, The Incentive Problem	3	
	22	How the Market System Deals with Risk : The Profit System, Shielding Employees and Suppliers from Business Risk, Benefits of Restricting Business Risk to Owners	4	
	Open Ended Module		30	
V		Discussion based on different economic systems prevailing in the world		
		Practical Assignments on economic decision making in different economies in the world		
		Seminar on the influence of institutions, regional cooperations, blocks and international cartels on economic policies		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Mankiw, N. G. (2021). *Principles of Economics*, 9TH EDITION, Cengage Learning. **(Module 1 and Module 2)**
2. Stiglitz, J. E., & Walsh, C. E. (2006). *Economics*. W. W. Norton. **(Module 2)**
3. McConnell, C. R., Brue, S. L., & Flynn, S. M. (2015). *Economics: Principles, Problems, and Policies*. TWENTIETH EDITION, McGraw-Hill Education. **(Module 3 and Module 4)**

ADDITIONAL READINGS

1. Team, C., & Press, O. U. (2017). *The economy: Economics for a Changing World*. Oxford University Press, USA.
2. Klein, G., & Bauman, Y. (2010). *The cartoon Introduction to economics: Volume One: Microeconomics*. Macmillan.
3. Sowell, T. (2015). *Basic Economics: A Common Sense Guide to the Economy*, FIFTH EDITION, Basic Books, New York.
4. Wheelan, C. (2010). *Naked Economics: Undressing the Dismal Science (Fully Revised and Updated)*. W. W. Norton & Company.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	3	-
CO 2	-	2	2	-	-	-	3	2	-
CO 3	-	3	2	-	1	-	1	1	-
CO 4	-	3	-	-	-	-	-	2	-
CO 5	-	-	-	-	-	-	2	3	-
CO 6	-	3	2	-	-	-	2	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	BUDGET ANALYSIS				
Type of Course	Major				
Semester	II				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores important concepts, documents and other fundamental aspects of budget process with reference to Central Budget in India.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts and documents of budgeting.	U	C	Instructor-created exams / Quiz
CO2	Develop and practice the skill of interpretation of budget.	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Understand the roles and responsibilities of various stakeholders in the budget process.	U	P	Seminar Presentation / Group Discussion
CO4	Appreciate the insights of public finance in the real world	Ap	C	Instructor-created exams / Home Assignments
CO5	Develop critical thinking about policy issues by emphasizing the links between economic analysis and current political issues.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to the Budget		10	15
	1	Budget: Definition, Budget in India	1	
	2	Features of Budget: Budget is prepared on Cash Basis, Rule of Lapse, Realistic Estimation, Budget to be on Gross/Net Basis, Form of Estimates to correspond to Accounts, Estimates to be on Departmental Basis	3	
	3	Scope of Budget: Budget Estimates, Revised Estimates, Actuals of the year preceding the current year, Consolidated Fund of India, Contingency Fund of India and the Public Account, Revenue account and Capital account	3	
	4	Budget documents: Annual Financial Statement (AFS), Demands for Grants (DG), Finance Bill, Statements mandated under FRBM Act, Expenditure Budget, Receipt Budget, Expenditure Profile	3	
II	Roles and Responsibilities		10	15
	5	Role of Legislature: Role of Parliament, President's Approval, Summary for The President, Summary for The Cabinet	2	
	6	Budget Presentation and Bills: Budget Presentation, General Discussions, Cut-Motions, Guillotine, Appropriation Bill, Finance Bill, Vote on Account	2	
	7	Role of Executive: Role of The Executive in The Budget Process, Role of Ministry of Finance, Role of Budget Division, Department of Expenditure, Administrative Ministries, Financial Advisers	2	
	8	Role of Constitutional Authorities: Controller General of Accounts, Niti Aayog, Finance Commission, Reserve Bank of India, Comptroller and Auditor General of India	2	
	9	Parliamentary Control: Estimates Committee, Department Related Standing Committees, Public Accounts Committee	2	
III	Budget Process		10	15
	10	Budget Circular	1	
	11	Estimates of Receipts: Revenue Receipts, Estimates of Capital Receipts	1	
	12	Estimates of Expenditure: General Guidelines for Preparation of Estimates of Expenditure, Information for Pre-Budget Discussions, Pre-Budget Discussions & Finalization of Provisional Estimates	2	
	13	Provisions for North Eastern Region and Sikkim	1	
	14	Special Instructions for the Composite Demand for Civil 'Pensions': Arrangements for submission of estimates, Compassionate Fund, Central Government Employees' Insurance Scheme	1	
	15	Estimates to be included in Demands for Grants Controlled by Budget Division	1	
	16	Instructions related to allocation for SC/ ST sub-component	1	

	17	Disclosures under FRBM Act: Guarantees given by the Government, Tax Revenues raised but not realized, Arrears of Non -Tax Revenues, Asset Register	2	
IV	Budget Finalization		15	25
	18	Budget Activities	1	
	19	Timelines for Budget Activities	2	
	20	Scrutiny of Statement of Budget Estimates (SBE): Centre's Expenditure, Centrally Sponsored Schemes and other Transfers, Expenditure Type (voted expenditure, charged expenditure, recovery, receipt)	5	
	21	Outcome Budget / Output-Outcome Monitoring Framework (OOMF)	2	
	22	Budget in Parliament: Lok Sabha, Rajya Sabha	5	
V	Open Ended Module		30	
		Analyze the budget allocations for specific sectors (e.g., education, healthcare, infrastructure) over time. Look for trends and changes.		
		Consider how the government's commitment to addressing various issues is reflected in budget allocations		
		Discuss the impact of budget decisions on different groups, regions, and sectors		
		Research the concept of outcome budgeting, which emphasizes efficient resource utilization and fiscal discipline		
		Discuss pressures affecting public sector budgeting, including the quantity of money available and how it's allocated		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Budget Manual 2022, Ministry of Finance, Government of India (**All modules**)

ADDITIONAL READINGS

1. Shim, J. K., & Siegel, J. G. (2008). *Budgeting basics and beyond*. Wiley.
2. Burt, E. S., Fleming, P. H., Clark, M. B., & Valuation, L. C. O. D. O. F. M. a. R. (1988). *Financial Budget Manual*.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	2	-	-	-	3	1	-
CO 3	-	-	-	-	-	-	-	3	-
CO 4	-	-	-	-	-	-	3	3	-
CO 5	-	2	-	-	2	-	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	ANALYTICAL TOOLS FOR ECONOMICS I				
Type of Course	Major				
Semester	III				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	Students shall acquire in-depth knowledge and able to explain the concepts of sets, functions, Differentiation, Integration and their applications in Economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To Understand the basic concept of set theory and functions	U	C	Instructor-created exams / Quiz
CO2	To Apply differentiation in solving economic problems	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	To apply integration in solving economic problems	U	P	Seminar Presentation / Group Discussion
CO4	To analyse relationship between economic variables mathematically, analyze, optimize and interpret them	An	P	Instructor-created exams / Home Assignments
CO5	To equip the students to identify a problem, investigate to find out relevant facts and find a logical conclusion	Ap	F	Viva Voce/Project
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks		
I	Set theory and Functions		10	15		
	1	Set theory: concepts, set operations, relations, functions and their properties	4			
	2	Elementary types of functions – linear, quadratic, cubic, polynomial, exponential and logarithmic	3			
	3	Graphs of functions-linear and quadratic algebraic functions	1			
	4	Applications of functions in Economics	2			
II	Differential Calculus		18	25		
	5	Limits and continuity of functions	2			
	6	Meaning of Derivative, Rules, Derivative of single variable and multi variable (except trigonometric function)	2			
	7	Derivatives of implicit functions and Inverse functions	2			
	8	Rate of change- Slope of a curve	2			
	9	Partial Differentiation	2			
	10	Marginal concepts related to Economic functions, Elasticity	2			
	11	Second order Derivatives	2			
	12	Conditions for Optimisation, Single and Multivariate Optimisation	2			
	13	Application in consumption and production decisions	2			
	III	Integral Calculus			10	15
		14	Meaning of integral, The Definite Integral, Rules of Integration, Integration by substitution		3	
		15	Integration by parts		2	
16		Area under a curve-estimation of producers and consumers surplus.	1			
17		The First and Second Fundamental Theorems of Calculus	2			
18		The Mean Value Theorem for integrals.	2			
IV		Linear Models and Matrix		10	15	
	19	Matrix: Meaning, Types and operations	2			
	20	Linear Models and Matrix Algebra and their Applications in Economics	3			
	21	Rank of a Matrix- Solving linear equations using Matrix Inverse	2			
	22	Determinants, Properties of Determinants and Cramer's Rule and their applications	3			
V	Open Ended Module		12			

	1	Develop critical thinking and problem-solving skills by applying statistical methods in Economic theories		
	2	Discussion based on statistical tools		
	3	Practical Assignments		
	4	Seminar		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Chiang, A and Wainwright, K. (2005). Fundamental methods of mathematical economics. Boston, Mass. McGraw- Hill/Irwin. EC (1262)-18.08.202219(**Module 1,2,3,4&5**)
2. Hoy, M., Livernois, J., McKenna, C., Rees, R., Stengos, T. (2001). Mathematics for Economics, Prentice-Hall India. (**Module 1,2,3,4&5**)
3. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002. (**Module 1,2,3,4&5**)
4. Introduction to Mathematical Economics, Third edition, Edward T Dowling, Schaum's outline series, McGraw – Hill (Module 1,2,3,4&5)

ADDITIONAL READINGS

1. A.Chiang & K.Wainwright: Fundamental Methods of Mathematical Economics, McGraw Hill.
2. E. Silberberg & Suen: The Structure of Economics, McGraw Hill
3. Simon & Blume, Mathematics for Economists, Viva Books.
4. Rudin W.: Principles of Mathematical Analysis, McGraw-Hill
5. D. Varberg, E. J. Purcell, S. E. Rigdon. Calulus, Eighth Edition, Prentice Hall.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	1	-	-	2	-	3
CO 3	-	-	-	1	-	-	2	-	3
CO 4	-	-	-	1	-	-	2	-	3
CO 5	-	2	-	-	-	-	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	EVOLUTION OF ECONOMIC THEORIES				
Type of Course	Major				
Semester	III				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Courses of 100 – 199 level				
Course Summary	This course aims to explore the key ideas of lasting value in the history of economic theory.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Acquire knowledge of basic economic principles behind various economic issues	U	C	Instructor-created exams / Quiz
CO2	Understand the origins of key economic concepts and models	U	C	Seminar Presentation / Group Discussion
CO3	Trace the evolution of major ideas through time	An	P	Seminar Presentation / Group Discussion
CO4	Discuss the influence and value of different writers and their contributions	Ap	P	Instructor-created exams / Home Assignments
CO5	Place theories and ideas studied within the context of the time	Ap	P	Practical Assignment / Observation of Practical Skills

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)

- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	People and Markets (Microeconomics) – Market mechanism, Competition, Price and Utility		13	19
	The Invisible Hand of the Market			
	1	From Mercantilism to Market Economy	1	
	2	Monopolies and the Cournot Point	1	
	Competition in Theory and in Practice			
	3	From “Perfect Competition” to Dynamic Competition	1	
	4	Competition Policy: Harvard versus Chicago	1	
	5	Natural Monopolies and Government Market Access Barriers	1	

	Prices, Costs and Profits			
	6	Alfred Marshall's Scissor Theorem	1	
	7	The Laws of Large-Scale Production and Their Limits	1	
	8	Turgot's Law of Returns and Marshall's Producers' Surplus	1	
	9	Trade Margins and Speculation	1	
	10	Fair Prices and Government Intervention into Markets	1	
	The Utility and Real Value of Commodities:			
	11	The Classical Paradox of Value and Gossen's Laws,	1	
	12	Pareto Optimality and Distribution of Income,	1	
	13	Consumer Sovereignty and Merit Goods	1	
II	People and Markets (Microeconomics) –Market Failure, Wage and Capital		10	15
	14	Causes of Market Failure: Should the State Act as Night Watchman? Natural Collective Goods, The Non-Applicability of the Exclusion Principle, Externalities and Environmental Problems, Are Environmental Taxes and Charges Unjust? Voluntary Negotiations: The Coase Theorem, The Environment and Politics	4	
	15	Causes of Market Failure: Should the State Act as Night Watchman? Natural Collective Goods, The Non-Applicability of the Exclusion Principle, Externalities and Environmental Problems, Are Environmental Taxes and Charges Unjust? Voluntary Negotiations: The Coase Theorem, The Environment and Politics	3	
	16	Fair Wages and the Right to Work: Thunen's Equation for a Natural Wage, Karl Marx's Labour Theory of Value, Problems of Socialism, The Pareto Curve, Minimum Wages and Maximum Income Limits? Productivity and Wage Rates	3	
III	Crises of Market Economies (Macroeconomics) – Money and Business Cycle		13	19
	17	How Does Money Enter the Economy? From Shell Money to the Peel Banking Act, Money Supply and Price Levels	3	
	18	Business Cycles and Shortages in Demand: Francois Quesnay's Tableau Economique, The Say Theorem, Marx's Theory of Crises and the Theory of the Purchasing Power of Wages, The Keynesian Revolution	5	
	19	Why Do Business Cycles Fluctuate? Knife-Edge Growth, Aftalion's Use of Fire as an Example: The Accelerator Principle, Business Cycle Policy: Is it Possible to Master the Chaos? Business Cycle Theory at a Political Level, The Influence of Politicians on the Business Cycle	5	
IV	Crises of Market Economies (Macroeconomics) – Inflation, Unemployment and Growth		12	17
	20	Inflation and Unemployment: The Quantity Theory, The Controversy about the Philips Curve, The Bullionist Controversy	4	

	21	Growth and Wealth: In Praise of Saving, Shortages of Capital and Underdevelopment, The Golden Rule of Accumulation, The Connection Between Interest Rates and Growth Rates	4	
	22	Limits of Economic Growth: The Oil Price Shocks of the 1970s, Are the World’s Raw Materials Running Out? The “Robber-Booty” Problem and the Hotelling Rule, Is there any Justice for Future Generations?	4	
V	Open Ended Module		12	
		Discussion based on reports about economic problems such as high unemployment or rising government debt.		
		Practical Assignments to trace the evolution of major ideas through time		
		Seminar on the influence and value of different writers and their contributions to the development of modern economic thought		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Van Suntum, U. (2005). *The Invisible Hand: Economic Thought Yesterday and Today*. Springer Science & Business Media. **(All modules)**

ADDITIONAL READINGS

1. Haney, L. H. 1. (2018). *History of Economic Thought; A critical account of the origin and development of the economic theories of the leading thinkers in the leading nations*. Franklin Classics.
2. Blaug, M. (1997). *Economic theory in retrospect*. Cambridge University Press.
3. Wolff, R. D., & Resnick, S. A. (2012). *Contending economic theories: Neoclassical, Keynesian, and Marxian*. MIT Press.
4. Buchholz, T. G. (2007). *New Ideas from Dead Economists: An Introduction to Modern Economic Thought*. Penguin.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	2	-	-	2	-
CO 2	3	-	-	-	-	-	-	-	-
CO 3	-	-	1	-	-	-	3	-	-
CO 4	-	-	-	2	-	-	3	-	-
CO 5	-	-	2	2	-	-	-	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		

Programme	B.A. Economics				
Course Title	INTERMEDIATE MICROECONOMICS				
Type of Course	Major				
Semester	IV				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics of 100 – 199 level				
Course Summary	This course focuses on the behaviour of consumers under certain conditions, optimisation in production, different conditions prevailing in competitive markets and the choices of a competitive firm.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the core concepts and methods of microeconomics	U	C	Instructor-created exams / Practical Assignment
CO2	Understand the basic elements of consumption and production theories.	U	F	Writing assignments / Quiz
CO3	To analyze the consumer choice under different conditions of preferences.	An	P	Observation of Practical Skills / Group Discussion
CO4	Apply the economic perspective and reason accurately in relation to different competitive market conditions.	Ap	P	Observation of Practical Skills / Home Assignments
CO5	To solve and interpret stylized problems based on microeconomic models.	An	P	Group Discussion / Instructor-created exams

CO6	Use microeconomic models to evaluate real-world microeconomic phenomena and issues.	E	M	Practical Assignment Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Choice Under Certainty		10	15
	1	Optimal Choice determination: Budget Line – Marginal Rate of Substitution;	2	
	2	Consumer’s Equilibrium using indifference curves -	2	
	3	Interior Optimum - Boundary Optimum.	2	
	4	Optimisation: Perfect Substitutes and Perfect Complements.	2	
	5	Estimating Utility Functions and implication of the MRS condition.	2	
II	Comparative Statics in Consumer Theory		14	20
	6	Offer Curves: Income Offer Curves- Engel Curves – Normal, Inferior and Giffen Goods –	3	
	7	Perfect Substitutes and Perfect Complements – Homothetic and Quasilinear preferences - Price Offer Curves:	2	
	8	Perfect Substitutes and Perfect Complements – Discrete Goods – Inverse Demand Function	1	
	9	Revealed Preference Approach: WARP and SARP;	2	
	10	The total change in demand: The substitution effect and income effect with suitable examples.	1	
	11	The total change in demand: The substitution effect and income effect with suitable examples.	2	
	12	Elasticity-Price elasticity of demand-The elasticity of linear demand curve-Income elasticity of demand; cross elasticity of demand;	2	

	13	Consumer Surplus.	1	
III	Optimisation In Production		12	17
	14	Short run and long run production function- Cost curves- Profit Maximisation in the Short Run and Long Run.	5	
	15	Cost Minimisation - Returns to Scale and the Cost Function	5	
	16	Cobb Douglas Production Function	2	
IV	The Analysis of Competitive Markets		12	18
	17	Short run and long run Equilibrium in perfectly competitive firm and industry	3	
	18	Monopoly – linear demand curve – Mark up pricing – Inefficiency of monopoly-Dead Weight Loss-	2	
	19	Price Discrimination-bundling-Two-part tariffs	2	
	20	Monopolistic Competition-Product differentiation-selling cost	2	
	21	Oligopoly-collusive versus non collusive oligopoly-	2	
	22	Kinked demand curve model.	1	
V	Open ended module		12	
		Discussion based on different market structures in the world		
		Seminars to analyse changing equilibrium conditions under different market structures.		
		Practical Assignments to compare and relate market of different products with different market structures.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. H.R Varian (2009), Intermediate Microeconomics- A Modern Approach. W W Norton & Co
2. Pindyck, R. and Rubinfeld, D. Microeconomics (2017, Ninth Edition). ISBN: 978-1-292-21-331-6.

ADDITIONAL READINGS

1. Dominick Salvatore (2013): Microeconomics: Theory and Applications- 5thEdition, Oxford
2. A Koutsoyiannis (1979): Modern Microeconomics- 2ndEdition, Macmillan
3. Gregory Mankiw (2006) Principles of Microeconomics, (Paperback) South Western
4. Robert Y Awh (1976): Microeconomics: Theory and Applications- John Wiley & Sons.
5. Watson and Getz (2004): Price Theory and its Uses- 5thEdition, AITBS Publishers and Distributors.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	1	1
CO 2	3	1	-	1	-	-	1	1	1
CO 3	3	2	-	1	-	-	1	2	1
CO 4	-	3	2	1	1	-	1	2	2
CO 5	2	1	-	1	-	-	2	2	3
CO 6	-	2	2	2	2	-	3	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	INTERMEDIATE MACROECONOMICS				
Type of Course	Major				
Semester	IV				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 100 – 199 level				
Course Summary	This course explores important concepts, basic theories and models and other fundamental macro aspects of economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the important concepts of economics and its real-world applications.	U	C	Instructor-created exams / Quiz
CO2	Develop and practice the skill of thinking like an economist.	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Help the student master the macroeconomic aspects essential for understanding the economic climate, specific economic issues, and policy alternatives.	U	P	Seminar Presentation / Group Discussion
CO4	Understand and apply the macroeconomic perspective and reason accurately and objectively about economic matters.	Ap	C	Instructor-created exams / Home Assignments
CO5	To make the students curious about the functioning of the economy and the power and breadth of economics	U	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Classical Macroeconomics		12	17
	1	The Classical Revolution, Production, Employment: Labor Demand, Labor Supply,	2	
	2	Equilibrium Output and Employment: The Determinants of Output and Employment, Factors That Do Not Affect Output,	2	
	3	The Quantity Theory of Money: The Equation of Exchange, The Cambridge Approach to the Quantity Theory,	2	
	4	Theory, The Classical Aggregate Demand Curve, The Classical Theory of the Interest Rate,	3	
	5	Policy Implications of the Classical Equilibrium Model: Fiscal Policy, Monetary Policy	3	
II	The Keynesian System		12	17
	6	The Problem of Unemployment, The Simple Keynesian Model: Conditions for Equilibrium Output,	2	
	7	The Components of Aggregate Demand: Consumption, Investment, Government Spending and Taxes,	2	
	8	Determining Equilibrium Income, Changes in Equilibrium Income,	1	
	9	Fiscal Stabilization Policy,	1	
	10	Exports and Imports in the Simple Keynesian Model Money in the Keynesian System: Interest Rates and Aggregate Demand,	2	
	11	The Keynesian Theory of the Interest Rate,	2	
	12	The Keynesian Theory of Money Demand, The Effects of an Increase in the Money Supply	2	
III	The orthodox Keynesian school		12	17
	13	The IS–LM model for a closed economy: Money Market Equilibrium: The LM Schedule, Product Market Equilibrium:	2	
	14	The IS Schedule, The IS and LM Schedules Combined, Underemployment equilibrium in the Keynesian model,	2	
	15	Factors That Affect Equilibrium Income and the Interest Rate:	1	
	16	Monetary Influences: Shifts in the LM Schedule, Real Influences: Shifts in the IS Schedule,	1	
	17	The Relative Effectiveness of Monetary and Fiscal Policy: Policy Effectiveness and the Slope of the IS Schedule, Policy Effectiveness and the Slope of the LM Schedule,	2	
	18	The IS–LM model for an open economy,	2	

	19	The Phillips curve and orthodox Keynesian economics, The central propositions of orthodox Keynesian economics	2	
IV	Aggregate Supply and Demand		13	19
	20	The Keynesian Aggregate Demand Schedule, The Keynesian Aggregate Demand Schedule Combined with the Classical Theory of Aggregate Supply,	3	
	21	A Contractual View of the Labor Market: Sources of Wage Rigidity, A Flexible Price–Fixed Money Wage Model, Labor Supply and Variability in the Money Wage: Classical and Keynesian Theories of Labor Supply,	3	
	22	The Keynesian Aggregate Supply Schedule with a Variable Money Wage, Policy Effects in the Variable-Wage Keynesian Model,	3	
	23	The Effects of Shifts in the Aggregate Supply Schedule: Factors That Shift the Aggregate Supply Schedule	4	
V	Open ended module		12	
		Discussion based on different schools of thought		
		Practical Assignments		
		Seminar		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Froyen, R. T., (2013). Study guide macroeconomics theories and policies, tenth edition, Pearson Education India
2. Brian Snowdon and Howard R. Vane (2005), Modern Macroeconomics: Its Origins, Development and Current State, Edward Elgar

ADDITIONAL READINGS

1. Goodwin, N., Harris, J. M., Nelson, J. A., Roach, B., & Torras, M. (2015b). Macroeconomics in context. Routledge.
2. Sikdar, S. (2020). Principles of macroeconomics. Oxford University Press.
3. Mankiw, N. G., Kneebone, R. D., & McKenzie, K. J. (2023). Principles of Macroeconomics, 9th Edition. Cengage Canada.
4. DeLorme, C. D., & Ekelund, R. B. (1983). Macroeconomics. Plano, Tex.: Business Publications.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO 7	PSO 8	PSO 9
CO 1	3	-	-	1	-	-	-	-	-
CO 2	1	1	1	1	-	-	2	1	-
CO 3	3	2	-	2	-	-	2	1	-
CO 4	3	2	-	2	-	-	3	2	-
CO 5	2	1	-	-	-	-	-	1	-
CO 6	1	-	2	1	3	-	2	1	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ANALYTICAL TOOLS FOR ECONOMICS II				
Type of Course	Major				
Semester	IV				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course introduces students about statistical methods for economic analysis. Students shall acquire in-depth knowledge in the concepts of probability, probability distributions, theory of estimation, hypothesis testing and their applications in economic analysis.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Basic understanding of computation of probability.	U	C	Instructor-created exams / Quiz
CO2	Identify various probability distributions and its applications	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Understand estimation of mean, variance and population of parameters of sampling distributions	U	P	Seminar Presentation / Group Discussion
CO4	Understand and Apply hypothesis testing for economics theories	Ap	C	Instructor-created exams / Home Assignments
CO5	Develop critical thinking and problem-solving skills by applying statistical methods in Economic theories and acquired knowledge to address complex economic challenges in the contemporary world.	Ap	F	Viva Voce/Project
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Elementary Probability Theory		14	21
	1	Concepts- Set theory- Permutations and Combinations, Definitions of Probability - classical, empirical and axiomatic approaches- Addition and multiplication laws	3	
	2	Conditional probability- Bay's theorem	2	
	3	Random variables- probability distribution- Mathematical expectation- moments	3	
	4	Two random variables: joint, Marginal and conditional probability functions	3	
	5	Computing expected values- Covariance and correlation coefficients	3	
Probability Distributions			11	16
II	6	Discrete Probability Distributions, Binomial , Poisson, Uniform - simple applications	4	
	7	Continuous probability distributions- Normal, Lognormal and Exponential Distributions (Derivations are not expected)	4	
	8	Concept of law of large numbers and Central limit theorem	1	
	9	Distribution function- Distribution function of one random variable	2	
III	Theory of Estimation		12	17
	10	Statistical Inference, Concept of population, sample- Sampling distributions- Standard error	3	
	11	Distributions of sample mean, Sample variance - chi square Student's t, and F distributions	3	
	12	Small and large sample properties of Z, t, Chi Square and F	2	
	13	Estimation of population parameters using method of OLS	1	
	14	Estimation of population parameters using method of maximum likelihood procedures	1	
	15	Point and interval estimation- Confidence intervals for population parameters	1	
	16	Properties of estimators	1	
IV	Testing of Hypothesis		11	16
	17	Simple and composite hypothesis- Null and alternative hypothesis	1	
	18	Type I and Type II error, Critical region- Level of significance, Power of a test	1	
	19	Test procedure - Test of significance in respect of Mean, Proportion, Variance and Correlation coefficient and their differences	2	
	20	Chi Square test of goodness of fit, and test for independence of attributes	2	
	21	Non parametric tests - Sign test, Wilcoxon- Mann Whitney U Test, Signed rank test	3	
	22	Kruskal Wallis test, Wald-Wolfowitz test	2	

V	Open Ended Module		12	
	1	Develop critical thinking and problem-solving skills by applying statistical methods in Economic theories		
	2	Discussion based on statistical tools		
	3	Practical Assignments		
	4	Seminar		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Paul G. Hoel, Sidney C. Port, Charles J. Stone: Introduction to Probability Theory, Universal Book Store, Delhi (Module 1)
2. John E. Freund's Mathematical Statistics with Applications, Pearson, 2014 (Module2)
3. G Casella and R L Berger, Statistical Inference, Duxbury Advanced Series, Cengage Learning, 200 and William G. Cochran, Sampling Techniques, John Wiley, 2007(Module 3)
4. Mood, A.M., F.A.Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill (Module 4)
5. Goon, Gupta and Dasgupta, Fundamentals of Statistics, Volume 1, 2, World Press(Module 4)

ADDITIONAL READINGS

1. Taro Yamane, Statistics: An Introductory Analysis, Harper & Row, Edition 3,1973
2. Hoel PG: Introduction to Mathematical Statistics, John Wiley & Sons, Edition 4,1971
3. YP Agarwal: Statistical Methods: Concepts, Application and Computation, Sterling Publishers1986
4. Sidney Siegal, N. John Castellan: Non parametric Statistics for Behaviour Sciences, Edition 2, 1988, McGraw-Hill
5. Tulsian, P.C and Vishal Pandey: Quantitative Techniques, Pearson Education, NewDelhi
6. S.P. Gupta: Statistical Methods, Sulthan Chand and Sons, NewDelhi.
7. Hooda R.P: Statistics for Business and Economics, Mac Million, NewDelhi
8. Alpha C Chiang: Fundamental Methods of Mathematical Economics, 2 nd Ed. -International Student Edition, McGrawhill
9. Edward T Dowling: Introduction to Mathematical Economics, Third Edition, Shaum's Outlines, Tata McGrawhill Publishing Co. Ltd, New Delhi.
10. SreenathBaruah: Basic Mathematics and its applications in Economics, Macmillan India Ltd.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	1	-	-	3	1	
CO 3	1	-	-	1	-	-	-	-	3
CO 4	-	-	1	2	-	-	2	-	3
CO 5	-	-	-	-	-	-	2		3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	ADVANCED MICROECONOMICS				
Type of Course	Major				
Semester	V				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course focuses on market on factor inputs, various aspects of general equilibrium and economic efficiency, the behaviour of consumers under uncertain conditions and basic concepts of behavioural economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the fundamental methods and theories of microeconomics	U	C	Instructor-created exams / Practical Assignment
CO2	Understand the functioning of factor markets.	U	C	Writing assignments / Quiz
CO3	To analyze the concept of general equilibrium and welfare analysis.	An	P	Observation of Practical Skills / Group Discussion
CO4	Apply microeconomic concepts to analyse real-life economic situations.	Ap	P	Observation of Practical Skills / Home Assignments
CO5	To evaluate consumer behaviour under uncertain conditions	E	P	Group Discussion / Instructor-created exams
CO6	Develop microeconomic models to evaluate real-world microeconomic phenomena and issues.	C	M	Practical Assignment Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)				
# - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs:	Marks
I	MARKET FOR FACTOR INPUTS		13	18
	1	Competitive Factor Markets - Demand for a Factor input with a single variable input	3	
	2	Demand for a Factor input with a several variable inputs	3	
	3	Supply of inputs - Equilibrium	3	
	4	Factor markets with Monopoly Power	2	
	5	Factor markets with Monopsony Power	2	
II	GENERAL EQUILIBRIUM AND ECONOMIC EFFICIENCY		15	20
	6	Efficiency in Exchange - The Advantages of trade	2	
	7	Edgeworth Box Diagram - Efficient Allocations	2	
	8	Contract Curve - Economic Efficiency of Competitive Markets	2	
	9	Equity and Efficiency - The Utility Possibilities Frontier	2	
	10	Social Welfare Functions	2	
	11	Equity and Perfect Competition	1	
	12	Efficiency in Production - Input efficiency - Production Possibility Frontier - Marginal Rate of Transformation	3	
	13	Efficiency in Output Markets	1	
III	UNCERTAINTY AND CONSUMER BEHAVIOUR		10	16
	14	Describing Risk- Probability- Expected Value – Variability -	1	
	15	Preferences towards Risk – Risk Averse- Risk Neutral – Risk Loving	2	
	16	Reducing Risk – Diversification – Law of Large Numbers – Actuarial Fairness	2	
	17	The Value of Information	2	
	18	Demand for Risky Assets – Trade-off between risk and return – Investor’s Choice Problem	3	
IV	BEHAVIOURAL ECONOMICS		10	16
	19	Reference Points and Consumer’s preferences	3	
	20	Endowment Effect – Loss Aversion – Framing- Fairness	3	
	21	Rules of Thumb and Biases in Decision making –	2	
	22	Anchoring – Rules of Thumb – Law of Small Numbers	2	
V	Open Ended Module		12	
	Discussion based on different market securities and its valuation.			
	Practical Assignments about firms’ decision making in calculating the worthiness of a capital investment.			

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Pindyck, R. and Rubinfeld, D. Microeconomics (2017, Ninth Edition). ISBN: 978-1-292-21-331-6.
2. H.R Varian (2009), Intermediate Microeconomics- A Modern Approach. W W Norton & Co

ADDITIONAL READINGS

1. Dominick Salvatore (2013): Microeconomics: Theory and Applications- 5thEdition, Oxford
2. A Koutsoyiannis (1979): Modern Microeconomics- 2ndEdition, Macmillan
3. Gregory Mankiw (2006) Principles of Microeconomics, (Paperback) South Western
4. Robert Y Awh (1976): Microeconomics: Theory and Applications- John Wiley & Sons.
5. Watson and Getz (2004): Price Theory and its Uses- 5thEdition, AITBS Publishers and Distributors.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	1	-	1	-	-	1	1	-
CO 3	3	2	-	1	-	-	1	1	-
CO 4	-	3	2	1	1	-	1	2	2
CO 5	2	1	-	1	-	-	2	2	2
CO 6	-	2	2	2	2	-	3	2	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	INTERNATIONAL TRADE THEORIES				
Type of Course	Major				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Microeconomics and Macroeconomics courses of 200 – 299 level				
Course Summary	This course explores the traditional, modern and new theories of international trade between nations and the relevance of international trade in an economy's development.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the various concepts in international Trade	U	C	Instructor-created exams / Quiz
CO2	Analyze the traditional modern and new trade Theories	An	P	Practical Assignment
CO3	Evaluate the process of international transactions between nations	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the theoretical knowledge to current international trade and financial flows	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the theoretical background of international trade and financial flows.	U	F	Viva

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to International Trade		12	17
	1	Scope and Importance of international trade	2	
	2	Concepts in International Trade(Terms of trade, Gains from Trade, Production Possibility Frontier ,Trade indifference curve)	2	
	3	Free Trade, Protection and Tariff	2	
	4	Balance of payment	2	
	5	Foreign exchange.	2	
	6	Purpose of International Economic Theories	2	
II	Traditional Theories of International Trade		11	17
	7	Mercantilists views on trade	2	
	8	Absolute cost advantage	2	
	9	Comparative advantage theory	3	
	10	Opportunity cost theory	2	
	11	Reciprocal demand theory.	2	
III	Modern Theories of International Trade		13	19
	12	Offer curve	2	
	13	Heckscher Ohlin Theorem	3	
	14	Leontief Paradox	2	
	15	Factor Price equalization Theorem	2	
	16	Factor intensity reversals-Stolper –Samuelson Theorem	2	
	17	Rybczynski Theorem	2	
IV	New Theories of International Trade		12	17
	18	Technological gap model	2	
	19	Product cycle model	2	
	20	Kravis Theory of Availability	2	
	21	Intra industry Trade model of Paul Krugman	3	
	22	Neo Heckscher Ohlin Theory	3	
V	Open ended module		12	
		Discussion - compare and contrast traditional and modern theories of International trade		
		Practical Assignments -Study about the relevance of international trade theories in explaining current International transactions between countries .		
		Seminar - presentation about the evaluation of new trade theories in the context of international trade of developing nations like India.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Dominick Salvatore , *International Economics Trade and Finance* – Eleventh Edition Wiley 2014 (Module I , II and III)
2. Krugman P. R .and Obstfeld M(2000)*International Economics :Theory and Policy*, Dorling Kindersley (India) Pvt.Ltd(Module IV)

ADDITIONAL READINGS

1. Sodersten , Bo and Geoffrey Reed - *International Economics* .Mcmillan Education Ltd 1998.
2. Bhagwati, J.N.(1998) *International Trade: Selected Readings*. McMillan University Press.
3. K.C Rana and K.N Verma(2014) —*International Economics*, Vishal publishing Co
4. Barbara Ingham (2015) *International Economics*,Prentice Hall, England
5. Carbaugh. R. J .(2014),*International Economics* ,12 th Edition,South Western,USA
6. *Handbook of International Economics* (3 volumes),Elsevier, Netherlands.
7. Charles Van Marrewijk(2007).*International Economics,Theory, Application and Policy*, Oxford University Press.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-		
CO 2	-		-	2	-		2		2
CO 3			-	2	2		2		
CO 4	-		-	3	3		3	2	2
CO 5		-	-	-	-		3		2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	GROWTH THEORIES IN ECONOMICS				
Type of Course	Major				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites	Microeconomics and Macroeconomics course of 200 – 299 level				
Course Summary	This course delves into growth theory, focusing on coherent mathematical formalizations of economic growth. It explores various theories, from classical economists (such as Ricardo, Malthus, and Marx) to contemporary ideas about increasing returns, externalities, and the weightless economy.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the process of economic growth	U	C	Instructor-created exams / Quiz
CO2	Analyze the theoretical aspects of growth	An	P	Practical Assignment
CO3	Evaluate various growth models	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the theoretical knowledge into understanding the growth process	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the growth process	U	F	Viva
CO6				

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)
Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	The concept of economic growth		10	15
	1	Distinction between growth and development	3	
	2	Determinants of inclusive and sustainable growth	2	
	3	Measurements of economic growth	2	
	4	Characteristics and features of developing nations	3	
II	Understanding growth models		12	18
	5	Adam Smith,	2	
	6	David Ricardo	2	
	7	Karl Marx	2	
	8	Joseph Schumpeter	3	
	9	Harrod- Domer model	3	
III	Advanced discussion on growth models		12	18
	10	Robert Solow	3	
	11	Joan Robinson	2	
	12	Endogenous growth model – Paul Romer	2	
	13	Fei – Ranis model of economic growth	3	
	14	Unified growth theory	1	
	15	Justin Lin - New structural Economics	1	
	IV	Perspectives on economic growth		
16		Balanced growth approach	2	
17		Unbalanced growth approach	2	
18		Convergence Theory	2	
19		Human capital and economic growth-Schultz Model	3	
20		Technical change and economic growth	2	
21		Production function and economic growth	2	
22		Structural changes and economic growth	1	
V	Open ended module		12	
		Discussion Growth experience of economies		
		Practical Assignments Study about the relevance of theories in explaining the growth experience of third world countries		
		Seminar present the student’s understanding of growth using a particular economy’s experience.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Thirlwall A.P, Economics of Development, Macmillan; 9th edition (1 December 2011)

ADDITIONAL READINGS

1. Debraj Ray, Development Economics, Oxford University Press, 2009
2. Misra & Puri, Economics of Development and Planning, Himalaya Publishing House, Mumbai, 2016.
3. Todaro and Smith, Economic Development, Pearson Education India; 10th edition 2011

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	-
CO 3		2	-	3	-	-	-
CO 4	-	3	1	3	-	2	2
CO 5	3	-	-	-	3	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	DEVELOPMENT ISSUES IN INDIAN ECONOMY				
Type of Course	Major				
Semester	VI				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Microeconomics and Macroeconomics course of 200 – 299 level				
Course Summary	This course explores important issues related to Development such as Poverty, Unemployment, Inequality and Inflation. The measurements of Development Issues are also incorporated the topics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Help in understanding the major development issues faced by Indian Economy and its historical precedents.	U	C	Instructor-created exams / Group Discussion.
CO2	Help in analysing the impact of public policy framed to deal with development issues such as Poverty, inequality in income distribution, unemployment and fiscal deficit.	An	F	Instructor-created exams/ Seminars/ Projects
CO3	Help in evaluating the conceptual framework methodology, trends and policy measures adopted regarding the development issues	E	C	Seminar Presentation / Group Discussion
CO4	After studying the development issues of Indian Economy, students will be exposed to economic reforms in India and problems of Indian economy	Ap	P	Instructor-created exams / Home Assignments
CO5	Students will learn how to think critically about public policy issues and made capable of measuring poverty and unemployment in a small region	E	M	Writing assignments/ Group Discussions
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Historical Precedents of Development Issues of Indian Economy		6	9
	1	History of development Issues of Indian Economy	2	
	2	Basic indicators of Development: Real income, Health and Education	1	
	3	Basic issues in economic development	1	
	4	Institutional framework and policy regimes	2	
II	Poverty		14	20
	5	Concepts of poverty- Absolute Measurement of Poverty, Relative measurement of Poverty, Multi -Dimensional Poverty	3	
	6	Poverty Estimation-Poverty Line Calculation- Consumption verses Income levels- Data collection Methods -URP, MRP	4	
	7	Multi-dimensional poverty index.	1	
	8	Post-Independence Poverty Estimation- Tendulkar Committee (2009) -Rangarajan Committee.	2	
	9	Trends of Poverty	2	
	10	Poverty Alleviation Programmes	1	
	11	Economic Characteristics of High- Poverty Groups	1	
	III	Inequality		
12		Income Inequalities in India -Causes of Income Inequalities in India	2	
13		Measurements of Inequality-Lorenz Curve- Gini coefficient	2	
14		The Ahluwalia- Chenery Welfare Index	2	
15		Trends of Inequality in India.	3	
16		Government Policy to tackle the problem of inequality	2	
17		Policy Options on Income Inequality and Poverty	2	
IV	Unemployment:		15	22
	18	Types and Structure of unemployment	3	
	19	Conceptual framework of key employment and unemployment indicators:	4	
	20	Nature and Estimates of Unemployment in India	3	
	21	Government Policy for Removing Unemployment	3	
	22	Major Employment Programmes	2	
V	Open ended module		12	
		Discussion based on the trends in fiscal deficit and inflation in India	3	
		A simple project for the Measurement of poverty using MRP method in a Ward of LSG	5	
		A simple project for the Measurement of Unemployment in the local territory using any one methodology	5	

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Nicholas C. Hope, et al. *Economic Reform in India : Challenges, Prospects, and Lessons*, edited by, Cambridge University Press, 2013. (Module 1)
2. [V.K. Puri](#), [S. K. Misra](#), [Bharat Garg](#) - *Indian Economy including Union Budget 2023-24, 2023*, Himalaya Publishing House. (Module 2,3,4 and 5)
3. [Uma Kapila](#): *Indian Economy Performance and Policies (23rd edition)*, Academic Foundation. (Module 2,3,4 and 5)
4. Singh, Shrawan Kumar. *Understanding the Indian Economy from the Post-Reforms of 1991, Volume II : Anatomy of the Indian Economy*, Business Expert Press, 2020. (Module 4)
5. Michael P. Todaro, Stephen C. Smith : *Economic Development (12th edition)*, Pearson (Module 1,2,3 and 4)

ADDITIONAL READINGS

1. Sreenivasan, T., Banerjee, A. V., Bardhan, P., & Somanathan, R. (2019). *Poverty and Income Distribution in India*, Juggernaut.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	1	-	-	3	-	-
CO 3	-	-	-	2	-	-	3	-	-
CO 4	-	3	1	2	-	-	3	-	-
CO 5	-	3	-	-	2	-	2	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ELEMENTARY ECONOMETRICS				
Type of Course	Major				
Semester	VI				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	1. Analytical Tools for Economics I of 200-299 level 2. Analytical Tools for Economics II of 200-299 level				
Course Summary	This course introduces students to the econometric methods used to conduct empirical analysis in Economics. The course is designed to provide the students with the basic econometric techniques needed to undertake applied research projects. It also provides the base for more advanced optional courses in econometrics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To Understand the methodology of Econometrics	U	C	Instructor-created exams / Quiz
CO2	To analyse linear models using ordinary least squares and make inferences about population parameters	An	P	Practical Assignment
CO3	To evaluate the elasticity, growth rates etc using econometric models	E	P	Seminar Presentation / Practical sessions
CO4	To detect econometric problems and apply remedial measures	E	P	Instructor-created exams / Home Assignments
CO5	Demonstrate econometric models and analysing skills by applying the acquired knowledge to address economic phenomena in the contemporary world. Forecasting using estimated models	Ap, C	F	Practical, Writing assignments
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Basic Principles of Economics		5	8
	1	What is Econometrics? Methodology of Econometrics	2	
	2	Uses of Econometrics	1	
	3	Limitations of Econometrics	1	
	4	The concept of PRF -Significance of stochastic error term-The SRF	1	
II	Simple linear regression model: Two variable case		12	19
	5	Ordinary least square estimation of a linear model	2	
	6	Assumptions underlying the method of least squares	1	
	7	Properties of estimators - The Gauss Markov theorem	2	
	8	Goodness of fit	2	
	9	Testing of hypothesis - Confidence intervals	3	
	10	Forecasting	2	
III	Other functional forms of regression models		12	19
	11	Multiple linear regression model - Extension of the single explanatory variable case to a multivariate model(specification, interpretation of regression coefficients)	2	
	12	Multiple linear regression model- test of significance of partial regression coefficients, adjusted R ²	2	
	13	Regression through the origin	1	
	14	Introducing non-linearity through functions of explanatory variables -Double log Model	1	
	15	Semilog models	1	
	16	Reciprocal model	1	
	17	Dummy Variable regression models - ANOVA & ANCOVA models- specification & interpretation of regression coefficients	3	
	18	Dummy variable trap	1	
IV	Violation of classical assumptions: consequences, detection and remedies		16	24
	19	Multicollinearity- Nature, Practical Consequences, Detection methods: using R ² and t values, auxiliary regressions, Remedial measures: combining cross sectional and time series, transformation of variables	4	
	20	Heteroscedasticity – Nature, Consequences, Detection methods: Park test, Spearman’s rank correlation test, White’s general heteroscedasticity test, Remedial measures: WLS method, using plausible assumptions about heteroscedasticity pattern	4	
	21	Autocorrelation - Nature, Consequences, Detection methods: the Run’s test, Durbin Watson d test, Remedial measures: GLS method	4	
	22	Specification Errors – Types, Consequences of underfitting and overfitting of model, Detection methods: DW d statistic, Ramsey’s RESET test, Lagrange multiplier test	4	

V	Open Ended Module	30	
	Estimation of economic functional relationships using cross section data, interpretation and forecasting (Excel package can be used for doing the regression)		

Note: The syllabus has five modules. There are 22 units in the first four modules composed of the theory topics. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is an open module designed to equip students with practical skill to analyse updated information on the contemporary world. The 10 marks for the evaluation of practical will be based on Module V. The end-semester examination for the theory part will be based on the 22 units in the first four modules.

REFERENCE:

1. Damodar N Gujarati, Dawn C Porter, Sangeetha Gunasekar (2012): Basic Econometrics (fifth edition) McGrawHill. (Module I,II,III,IV)
2. Gujarati, D. (2014). Econometrics by example, 2nd ed. Palgrave Macmillan (Module I,II,III,V).
3. A Koutsoyiannis (1977): Theory of Econometrics- An introductory exposition of Econometric Methods, 2nd Edition, Palgrave (Module I, II)

ADDITIONAL READINGS

1. Dougherty, C. (2011). Introduction to econometrics, 4th ed. Oxford University Press. 20
2. Gujarati, D., Porter, D. (2010). Essentials of econometrics, 4th ed. McGrawHill.
3. Kmenta, J. (2008). Elements of econometrics. Khosla Publishing House.
4. Maddala, G., Lahiri, K. (2009). Introduction to econometrics, 4th ed. Wiley.
5. Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning.
6. Lawrence R Klein (1975), A Text Book of Econometrics, Fourth Edition, Prentice Hall, Inc, Englewood cliffs, NJ, USA

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	1	-	-	3	-	-	3	-	-
CO 3	-	-	-	2	-	-	2	-	-
CO 4	1	-	-	1	-	-	2	-	3
CO 5	-	-	-	-	-	-	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	✓
CO 6			✓	

Programme	B.A. Economics				
Course Title	ADVANCED MACROECONOMICS				
Type of Course	Major				
Semester	VI				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Intermediate Macroeconomics course of 200 – 299 level				
Course Summary	This course explores important concepts, theories, models and other fundamental macro aspects of economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the important concepts of economics and its real-world applications.	U	C	Instructor-created exams / Quiz
CO2	Develop and practice the skill of thinking like an economist.	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Help the student master the macroeconomic aspects essential for understanding the economic climate, specific economic issues, and policy alternatives.	AN	P	Seminar Presentation / Group Discussion
CO4	Apply the macroeconomic perspectives and reason accurately and objectively about economic matters.	EV	C	Instructor-created exams / Home Assignments
CO5	To make the students curious about the functioning of the economy and the power and breadth of economics	C	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	The orthodox monetarist school		11	16
	1	The quantity theory of money approach,	2	
	2	The expectations-augmented Phillips curve analysis,	3	
	3	The monetary approach to balance of payments theory and exchange rate determination,	3	
	4	The orthodox monetarist school and stabilization policy	3	
II	The new classical school and the real business cycle school		12	18
	5	The structure of new classical models,	1	
	6	Equilibrium business cycle theory,	2	
	7	The policy implications of the new classical approach,	3	
	8	The real business cycle school: Real business cycle theory, The structure of a real business cycle model,	3	
	9	A real business cycle aggregate demand and supply model,	2	
	10	The policy implications of real business cycle theory	1	
III	The new Keynesian school		10	15
	11	The fall and rise of Keynesian economics, New Keynesian economics,	3	
	12	Core propositions and features of new Keynesian economics, Nominal rigidities,	2	
	13	Dornbusch's overshooting model,	2	
	14	Real rigidities,	1	
	15	New Keynesian business cycle theory, Policy implications	2	
IV	The new political macroeconomics		15	21
	16	Political distortions and macroeconomic performance, Political influences on policy choice,	2	
	17	The role of government, Politicians and stabilization policy,	2	
	18	Alternative approaches to the 'political business cycle': an Overview,	2	
	19	The Nordhaus opportunistic model, The Hibbs partisan model,	2	
	20	The decline and renaissance of opportunistic and partisan models, Rational political business cycles,	2	
	21	Rational partisan theory, Opportunistic and partisan behaviour: a synthesis,	2	
	22	Politics, time inconsistency, credibility and reputation, Policy implications of politico-economic models	3	
V	Open Ended Module		12	
	1	Consumer theories after Keynes		
	2	Investment Theories		
	3	Theories of demand for money and supply of money		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split

between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

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

ADDITIONAL READINGS

1. Goodwin, N., Harris, J. M., Nelson, J. A., Roach, B., & Torras, M. (2015b). *Macroeconomics in context*. Routledge.
2. Sikdar, S. (2020). *Principles of macroeconomics*. Oxford University Press.
3. Mankiw, N. G., Kneebone, R. D., & McKenzie, K. J. (2023). *Principles of Macroeconomics*, 9th Edition. Cengage Canada.
4. DeLorme, C. D., & Ekelund, R. B. (1983). *Macroeconomics*. Plano, Tex. : Business Publications.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO 9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	2	-	1	-	-	2	2	-
CO 3	3	-	-	1	-	-	-	2	-
CO 4	-	3	1	2	-	-	3	1	-
CO 5	3	-	-	-	-	-	2	1	-
CO 6	-	2	2	3	2	-	1	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	TIME SERIES ECONOMETRICS				
Type of Course	Major				
Semester	VII				
Academic Level	400-499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Econometrics course of 300-399 level				
Course Summary	This course introduces students to the econometric methods using time series data to conduct empirical analysis in Economics. The course is designed to provide the students with the basic econometric techniques needed to undertake applied research projects using macroeconomic time series data.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To Understand the basic concepts of Time series Econometrics	R,U	C	Instructor-created exams / Quiz
CO2	To analyse dynamic econometric models	An	P	Instructor-created exams- Practical Assignment
CO3	To understand and evaluate the stochastic processes	E	P	Seminar Presentation / Quiz /Practical sessions
CO4	To analyse the models of stochastic processes	E	P	Instructor-created exams / Home Assignments
CO5	To understand the nature of financial time series and apply the models to measure volatility	Ap	F	Writing assignments
CO6	Forecasting using estimated models - Demonstrate econometric models and analysing skills by applying the acquired knowledge to address economic phenomena in the contemporary world.	C	P	Practical sessions/Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Dynamic Econometric Models		11	18
	1	Role of Lags in Economics	1	
	2	Distributed Lag (DL) model, Autoregressive (AR) model and Autoregressive Distributed Lag (ARDL) model	2	
	3	The Koyck distributed lag model	2	
	4	Rationalisation of Koyck model (AE model)	2	
	5	Estimation of ARDL Model - Instrumental Variable Method	2	
	6	Almon Approach to Distributed lag model	2	
II	Basic Concepts in Time Series Econometrics		16	22
	7	Stochastic processes, Stationary processes, Purely random processes	1	
	8	Nonstationary stochastic processes – Random walk without drift, Random walk with drift	1	
		Unit root stochastic process, Integrated Process	2	
	9	Transforming nonstationary time series into stationary: Trend stationary process, Difference stationary stochastic processes	3	
	10	Tests of stationarity- ACF and correlogram,	2	
	11	Dickey Fuller and Augmented Dickey Fuller tests of stationarity	3	
	12	Cointegration, Cointegration Test, Error Correction Model	4	
III	Modelling Stochastic Processes		12	18
	13	AR, MA, ARMA and ARIMA models	2	
	14	The Box Jenkins methodology	3	
	15	Forecasting using estimated ARIMA model	1	
	16	Multivariate time series - VAR	1	
	17	Estimation of VAR and Forecasting with VAR	2	
	18	VAR and causality, Problems with VAR modelling	3	
IV	Modelling Financial Time Series		6	12
	19	Volatility Clustering in financial time series	1	
	20	ARCH model	2	
	21	GARCH model	1	
	22	Forecasting volatility in financial time series	2	
V	Simultaneous Equation Models		30	
		Examples for Simultaneous equation models- Simultaneous equation bias – Identification Problem- Estimation Approaches : Recursive model & OLS estimation, ILS, TSLS – Forecasting		

Note: The syllabus has five modules. There are 22 units in the first four modules composed of the theory topics. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is an open module designed to equip students to analyse simultaneous equations in macroeconomic models. The 10 marks for the evaluation will be based on Module V. The end-semester examination will be based on the 22 units in the first four modules.

REFERENCE:

1. Damodar N Gujarati, Dawn C Porter, Sangeetha Gunasekar (2012): Basic Econometrics (fifth edition) McGrawHill (Module I,II,III,IV,V)
2. Damodar N Gujarati and Dawn C Porter (2009): Basic Econometrics- Fifth Edition, McGraw Hill International Edition (Module I,II,III)
3. Gujarati, D. (2014). Econometrics by example, 2nd ed. Palgrave Macmillan. (Module II,III,IV)
4. A Koutsoyiannis (1977): Theory of Econometrics- An introductory exposition of Econometric Methods, 2nd Edition, Palgrave
5. Jack Johnston, John Dinardo, Econometric Methods, McGraw Hill International Edition (Modules I, III,IV)

ADDITIONAL READINGS

6. Dougherty, C. (2011). Introduction to econometrics, 4th ed. Oxford University Press.
7. Gujarati, D., Porter, D. (2010). Essentials of econometrics, 4th ed. McGrawHill.
8. Kmenta, J. (2008). Elements of econometrics. Khosla Publishing House.
9. Maddala, G., Lahiri, K. (2009). Introduction to econometrics, 4th ed. Wiley.
10. Wooldridge, J. (2014). Introduction to econometrics: A modern approach, 5th ed. Cengage Learning.
11. Lawrence R Klein (1975), A Text Book of Econometrics, Fourth Edition, Prentice Hall, Inc, Englewood cliffs, NJ, USA
12. James H Stock and Mark W Watson (2008): Introduction to Econometrics- Pearson, Addison Wesley.
13. Christopher Dougherty (2007): Introduction to Econometrics, Third Edition, Oxford University Press.
14. Robert S Pyndick and Daniel L Rubinfeld (1998): Econometric Models and Economic Forecasts- Fourth Edition, McGraw Hill International Edition

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	3	-	-	2		
CO 3	-	-	-	-	-	-	2	2	3
CO 4	-	-	-	-	-	-	2	2	3
CO 5	-	-	-	2	-	-	3	3	3
CO 6	-	-	-	2	-	-	3	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5	✓	✓		✓
CO 6	✓	✓	✓	

Programme	B.A. Economics				
Course Title	GAME THEORY AND ECONOMIC BEHAVIOUR				
Type of Course	Major				
Semester	VII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Advanced Microeconomics course of 300 – 399 level				
Course Summary	The expected outcome is for students to gain a comprehensive understanding of game theory principles and their application in economics, fostering strong analytical, problem-solving, and policy evaluation skills essential for tackling real-world economic challenges.				

COURSE OUTCOMES (CO):

CO1	Understand the theory of games
CO2	Analyze the decision making under interdependent situations
CO3	Evaluate different strategies
CO4	Can predict the optimal strategies of players and how the players can exploit strategic situations for their benefit
CO5	The students can understand how to formulate different real life situations as games

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Game Theory		5	8
	1	What is game theory?	1	
	2	History of game theory	1	
	3	Theory of rational choice	2	
	4	Interacting decision makers	1	
II	Strategic Games and Nash Equilibrium		14	22
	5	Strategic games: examples	3	
	6	Nash equilibrium: concept and examples	2	
	7	Best response functions	2	
	8	Dominated Actions	2	
	9	Symmetric games and symmetric equilibria	2	
	10	Illustrations of Nash equilibrium-Cournot and Bertrand's model of duopoly market	3	
III	Mixed Strategy Equilibrium		15	23
	11	Introduction	2	
	12	Strategic games with randomisation	2	
	13	Mixed strategy Nash equilibrium: concept and examples	2	
	14	Dominated Actions	2	
	15	Pure equilibria when randomization is allowed	3	
	16	Equilibrium in a single population	2	

	17	Formation of Players' beliefs	2	
IV	Extensive Games with perfect information		11	17
	18	Introduction to extensive games	2	
	19	Strategies and outcomes	2	
	20	Nash equilibrium- Subgame perfect Nash equilibrium	2	
	21	Backward induction	2	
	22	Illustrations of Extensive Games and Nash Equilibrium-Stackelberg model of duopoly markets	3	
V	Open Ended Module		30	
	1	Seminar on other examples like ; <i>Bach or Stravinsky, Matching Pennies the Stag Hunt</i> etc		
	2	Discussion on the importance of game theory in modern economy		
	3	Exercises- saddle point		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE

1. Osborne, Martin J. *An introduction to game theory*. Vol. 3. No. 3. New York: Oxford university press, 2004.

ADDITIONAL READINGS

1. Gibbons, Robert. "An introduction to applicable game theory." *Journal of Economic Perspectives* 11.1 (1997): 127-149.
2. Gibbons, Robert, and Robert Gibbons. "A primer in game theory." (1992).
3. Fudenberg, Drew, and Jean Tirole. *Game theory*. MIT press, 1991.
4. Pindyck, Robert S. *Microeconomics*. 2018.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	2	-	-	1	-	-	-	-
CO 2	-	-	2	3	-	-	-	-	-
CO 3	-	-	2	1	2	-	-	-	-
CO 4	-	-	-	-	-	-	3	-	2
CO 5	-	-	-	-	-	-	-	3	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	DEVELOPMENT THEORIES AND MODELS				
Type of Course	Major				
Semester	VII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Microeconomics and Macroeconomics course of 200 – 299 level				
Course Summary	To understand the theoretical aspects of development and the factors influencing it.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the process of economic development	U	C	Instructor-created exams / Quiz
CO2	Analyze the theoretical aspects of development	An	P	Practical Assignment
CO3	Evaluate various development theories	Ap	F	Seminar Presentation
CO4	Apply the theoretical knowledge into understanding the development process	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the development process	U	F	Viva

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)
Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	The concept of economic development		10	15
	1	Development and underdevelopment	1	
	2	Development gap	1	
	3	Measurement of poverty	2	
	4	Views of Amartya Sen	2	
	5	Capability approach	1	
	6	Development and institutions	2	
	7	Human capital with reference to gender gap in development process	1	
II	Theories of development		16	26
	8	Rostow's stages of growth	2	

	9	Kaldor's six characteristics of growth	2	
	10	Structural change model – Prebisch-Singer model, Lewis	4	
	11	Dependency theories – Emmanuel dualism	3	
	12	False Paradigm	1	
	13	Dualism-financial, technical and social Jorgenson's theory of dual economy	2	
	14	Jorgenson's theory of dual economy	2	
III	Contemporary development theories		10	15
	15	Big push theory	2	
	16	Underdevelopment as coordination failure	1	
	17	Multiple equilibria	3	
	18	O ring theory	1	
	19	Leibenstein's Theory of Critical Minimum Efforts	3	
IV	Regional development models		9	14
	20	Growth Pole theory – Francois Perroux	3	
	21	Gunnar Myrdal- Theory of cumulative causation	3	
	22	Friedman- Core Periphery theory	3	
V	Open ended module		30	
		Discussion Developing experience of third world economies		
		Practical Assignments Study about the relevance of theories in explaining the development experience of third world countries		
		Seminar present the student's understanding of development indicators using a particular economy's experience.		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Thirlwall A.P, Economics of Development, Macmillan; 9th edition (1 December 2011)

ADDITIONAL READINGS

1. Debraj Ray, Development Economics, Oxford University Press, 2009
2. Misra & Puri, Economics of Development and Planning, Himalaya Publishing House, Mumbai, 2016.
3. Todaro and Smith, Economic Development, Pearson Education India; 10th edition 2011

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-		2
CO 2	-	-	-	1	-	-	-	3	-
CO 3	-	-	-	3		-	-	3	-
CO 4	-	3	1	2	-	-	3	3	2
CO 5	3	-	-	-	-	-	-		2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5	✓	✓	✓	✓

Programme	B.A. Economics				
Course Title	BALANCE OF PAYMENTS AND EXCHANGE MARKET				
Type of Course	Major				
Semester	VII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Microeconomics and Macroeconomics course of 200 – 299 level				
Course Summary	This course explores the important principles and theories of balance of payment, foreign exchange transactions and working of current International Monetary system. It also explores the foreign exchange management in Indian context .				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concepts in BoP and foreign Exchange	U	C	Instructor-created exams / Quiz
CO2	Analyze the various approaches of Balance of payment and theories of Exchange Rate determination	An	P	Practical Assignment
CO3	Evaluate the process of foreign exchange transactions and management	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the theoretical knowledge to current international Monetary system	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the BoP and forex Management in India.	U	F	Viva
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Balance of Payment and Balance of Trade		10	15
	1	Balance of trade & Balance of Payment: Accounts in BOP	2	
	2	Equilibrium and Disequilibrium in BoP and Measures to correct BoP	3	
	3	Marshall Lerner Condition, J curve effect and Absorption approach	3	
	4	Foreign Trade Multiplier	2	
II	Foreign Exchange Rate		11	17
	5	Evolution and Functions of foreign exchange market	2	
	6	Theories of Exchange Rate Determination-Mint Parity, Purchasing Power Parity and Balance of Payment theory	2	
	7	Exchange Rate systems - fixed, flexible and Managed Floating	2	
	8	Different Types of Transactions in foreign Exchange Market	2	
	9	IMF and International Liquidity management.	3	
III	Approaches to Balance of Payment and Exchange Rate		15	24
	10	Monetary Approach to Balance of Payment	2	
	11	Portfolio Balance Approach	2	
	12	Exchange Rate overshooting	1	
	13	Internal and External Balance - Swan model	2	
	14	IS- L M- BP Model	2	
	15	Currency substitution Model	2	
	16	Exchange rate volatility	2	
	17	Redux and Target zone Models	2	
IV	Balance of payment and Forex Management in India		9	14
	18	Direction and composition of Balance of payments in India	2	
	19	BOP crisis in India	2	
	20	Currency Convertibility	1	
	21	Exchange control Measures in India	2	
	22	Foreign Exchange Management in India- Fiscal, monetary and trade policy.	2	
V	Open ended module		30	
		Discussion - International Monetary System –Present and Future		
		Practical Assignments 1) Study about the recent trends of balance of payments in developing countries with special reference to India. OR 2) Compare and contrast BoP Account Statement of India and USA.		
		Seminar Discuss the role of IMF as a global financial controller.		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Dominick Salvatore (2014) *International Economics Trade and Finance – Eleventh Edition* Wiley(Module I,II & III)

ADDITIONAL READINGS

1. Sodersten , Bo and Geoffrey Reed , *International Economics* .Macmillan Education Ltd 1998.
2. Gandolfo (2002), *International Finance and Open economy Macroeconomics* ,Springer ,Tokyo.
3. Pilbeam ,Keith(2006) ,*International Finance* ,Palgrave MacMillan New York(Module III)
4. Grath. A(2008), *International Trade and Finance*, London
5. Kindleberger, C.P,*International Economics*, R.D. Irwin, Homewood
6. Bhagwati, J.N(Ed), *International Trade: Selected Readings*, MIT press, 1987.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	2	-	2	3	3
CO 3			-	2	-		-		2
CO 4	-		1	2	3		3	3	2
CO 5	3	-	-	-	3		2	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

1. Quiz / Assignment/ Viva Voce/ Discussion / Seminar
2. Internal Exam
3. Practical Assignments (20%)
4. Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	DEVELOPMENT ISSUES IN KERALA				
Type of Course	Major				
Semester	VII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Economics course of 200 – 299 level				
Course Summary	The course covers developmental experiences of Kerala, Demography, Human Development and Social Inclusion, Population and Human Development, Development Issues, state finance and planning. It also covers assignment on identification of data base on Kerala Economy and discussion regarding the Economic Review and the State Budgets and Prepare reports based on discussions.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the developmental experiences of Kerala Economy.	U	F	Instructor-created exams / Discussions/ Quiz
CO2	To examine the population changes, Human Development and Inclusive growth in Kerala	E	F	Instructor-created exams/ Discussions/Quiz
CO3	To understand and examine the major development issues of Kerala.	E	P	Instructor-created exams/ Seminar Presentation / Discussion/Quiz
CO4	To evaluate state finances and planning in Kerala and enable them to be a part of policy implementation.	E	P	Instructor-created exams / Group Discussion/ Assignments/ Quiz
CO5	To understand data base on Kerala Economy, conduct a discussion and prepare reports	U	F	Group Discussion/ Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Development Experiences of Kerala		10	15
	1	Economic Growth in Kerala	2	
	2	Structural Transformation in Kerala	2	
	3	Sectoral performance and Development of Infrastructure in Kerala	2	
	4	Kerala Model of Development	2	
	5	Rebuild Kerala Initiative	2	
II	Demography, Human Development and Social Inclusion		14	22
	6	Changing Demographic Profile in Kerala	2	
	7	Labour, Employment and Skill Development	2	
	8	Migration: Types, Causes, Trends and Impacts	2	
	9	Urbanization: Causes, Trends and Challenges	2	
	10	Education and Health	2	
	11	Gender and Development	2	
	12	Social Security Measures in Kerala		
III	Development Issues of Kerala Economy		11	18
	12	Unemployment: Causes, Trend and Consequences	2	
	13	Growth of Informal Sector in Kerala	2	
	14	Greying Population: Trend, Concern and Challenges	2	
	15	Banking and Tourism	2	
	16	External Sector in Kerala: External Trade- Pattern and Trend.	3	
IV	State Finance and Planning		10	15
	18	Financial Indicators of State Government	2	
	19	Fiscal Deficit and Public Debt	2	
	20	People's Plan Campaign and Decentralized Planning	2	
	21	Fiscal Decentralization: Achievements and Challenges in Kerala	2	
	22	Inclusive Growth in Kerala	2	
V	OPEN ENDED		30	
	Suggested Exercises (Arrange any two appropriately).			
	1	Assignment on identification of data base on Kerala Economy and interpretation of the given data		
	2	Conduct a discussion regarding the Economic Review and the State Budgets and ensure a debate/quiz related to the various budgets		
	3	Prepare reports based on discussions		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCES:

1. *Oommen, M.A. (1999) Rethinking Development: Kerala's Development Experience, Concept, New Delhi.*
2. *Prakash, B.A. (2004) Kerala's Economic Development: Performance and Prospects in the Post Liberalisation Period, Sage Publications, New Delhi.*
3. *Mani, Sunil (2020) Kerala and the World Economy, Centre for Development Studies (Under the aegis of Govt. Of Kerala & Indian Council of Social Science Research), Thiruvananthapuram.*
4. *Zachariah K.C & Irudaya Rajan.S (2013) Diaspora in Kerala's Development, Daanish Books,*
5. *Prakash, B.A.&Jerry Alwin (2018) Kerala's Economic Development: Emerging Issues and Challenges, Sage Publications, New Delhi*
6. *Sundar Ramanathaiyer & Stewart Macpherson (2000) Social Development in Kerala: Illusion and Reality? Ashgate Publishing, UK.*
7. *State Urbanization Report 2012.*
8. *Kerala Migration Survey Report 2018*
9. *Kerala Development Report 2021*
10. *Kerala Economic Review for various years.*

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	1	-	-	-	-	-	3	-	-
CO 2	-	2	-	-	-	-	3	-	-
CO 3	-	2	-	-	-	-	3	-	-
CO 4	1	2	-	-	-	-	3	-	-
CO 5	1	-	-	-	-	-	3	-	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		

Programme	B.A. Economics				
Course Title	MACROECONOMIC MODELS AND MEASUREMENT				
Type of Course	Major				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	3	-	2	75
Pre-requisites	Macroeconomics Course of level 300 – 399				
Course Summary	This course is a modern approach to macroeconomics by building macroeconomic models from microeconomic principles, consistent with the way that macroeconomic research is conducted today.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Allows deeper insights into economic growth processes and business cycles.	U	C	Instructor-created exams / Quiz
CO2	Integrates the study of macroeconomics with approaches in courses in microeconomics and in field courses in economics	Ap	P	Seminar Presentation / Group Discussion
CO3	Develop a comprehensive and broad perspective of what macroeconomic theory is today	U	P	Seminar Presentation / Group Discussion
CO4	Apply macroeconomic models and tools in specific contexts and to particular problems	E	P	Instructor-created exams / Home Assignments
CO5	Construct models suitable for specific contexts	C	F	Practical Assignment / Observation of Practical Skills
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Measurement Issues in Macroeconomics		13	20
	1	Macroeconomic Models	2	
	2	Microeconomics Principles behind Macroeconomic Models	2	
	3	Disagreements in Macroeconomics	2	
	4	What do we learn from Macroeconomic Analysis	2	
	5	Labour Market measurement: unemployment rate, participation rate, employment/population ratio	2	
	6	Business cycle measurement: Regularities in GDP Fluctuations, Co-movement among economic time series, co-movements between the price level and real GDP and between the inflation rate and real GDP, co-movements among labor market variables and real GDP	3	
II	Closed Economy One Period Macroeconomic Model		12	18
	7	Competitive equilibrium	2	
	8	Optimality	2	
	9	Sources of social inefficiency	2	
	10	Effects of change in government purchases	2	
	11	Effects of change in total factor productivity	2	
	12	Effects of a distorting labour income tax	2	
III	Two Period Model of Consumption-Savings Decision		11	18
	13	Two Period Model of the Economy	2	
	14	The Consumer's Lifetime Budget Constraint	1	
	15	The Consumer's Preferences	1	
	16	Consumer Optimization	1	
	17	How the consumer responds to changes in his or her current income, future income, and the market real interest rate	2	
	18	Competitive equilibrium	2	
	19	The Ricardian Equivalence Theorem	2	
IV	Money, Banking, Prices and Monetary Policy		9	14
	20	Monetary Intertemporal Model – Fisher relation – Competitive equilibrium	3	
	21	Money neutrality in the monetary intertemporal model.	3	
	22	Conventional Monetary Policy, the Liquidity Trap, and Unconventional Monetary Policy	3	
V	Construction of Macroeconomic Models with reference to Indian Economy		30	
		Practical assignments to measure labour market related concepts in India		
		Presentation of macroeconomic model constructed in Indian		

		context		
		Group discussions on social inefficiency		
		Debate: Conventional Vs Unconventional Monetary Policy		

Note: The syllabus has five modules. There should be total 22 units in the first four modules together, composed of the theory topics. The number of units in the last module can vary. There are 45 instructional hours for the first four modules and 30 hrs for the final one. Module V is designed to equip students with practical skills. The 20 marks for the evaluation of practical will be based on Module V. Internal assessments (30 marks) are split between the practical module (20 marks) and the first four modules (10 marks). The end-semester examination for the theory part will be based on the 22 units in the first four modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Williamson, S. D. (2017). *Macroeconomics*, Global Edition. Pearson Higher Ed. (All modules)

ADDITIONAL READINGS

1. Romer, D. (2019). *Advanced Macroeconomics*. McGraw-Hill/Irwin.
2. Hoover, K. D. (2012). *Applied Intermediate Macroeconomics*. Cambridge University Press.
3. Ljungqvist, L., & Sargent, T. J. (2018). *Recursive Macroeconomic Theory, fourth edition*. MIT Press.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	-	-	-	3	2	-
CO 3	-	-	-	-	-	-	2	3	-
CO 4	-	-	1	-	-	-	2	3	-
CO 5	-	-	-	-	-	-	1	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	APPLIED MICROECONOMICS AND EVALUATION				
Type of Course	Major				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Microeconomics course of 300 – 399 level				
Course Summary	This course provides different aspects of microeconomic analysis while emphasizing real-world economic problems and incorporating coverage of the most innovative subjects in the discipline.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand mechanism of market	U	F	Instructor-created exams / Quiz
CO2	Analyse the market situation when externality is present	An	P	Instructor-created exams / Quiz
CO3	Evaluate market working with asymmetric information	E	P	Seminar Presentation / Group Discussion
CO4	Apply economic theory to solve welfare maximization problems and for fair allocation	Ap	P	Instructor-created exams / Home Assignments/Viva-voce
CO5	Create a model for depicting the real nature of welfare of society	C	M	Practical Assignment / Observation of Practical Skills
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Exchange		18	25
	1	Market Trade	2	
	2	The Algebra of Equilibrium	2	
	3	Walras' Law	2	
	4	Relative Prices	2	
	5	The Existence of Equilibrium	2	
	6	Equilibrium and Efficiency	2	
	7	The Algebra of Efficiency	2	
	8	Implications of the First Welfare Theorem	2	
9	Implications of the Second Welfare Theorem	2		
II	Welfare		10	15
	10	Aggregation of Preferences	2	
	11	Social Welfare Functions	2	
	12	Welfare Maximization	2	
	13	Individualistic Social Welfare Functions	2	
	14	Fair Allocations, Envy and Equity	2	
III	Externalities		10	15
	15	Quasilinear Preferences and the Coase Theorem	3	
	16	Production Externalities	3	
	17	Market Signals	2	
	18	The Tragedy of the Commons	2	
IV	Asymmetric Information		10	15
	19	The Market for Lemons, Quality Choice, Adverse Selection	4	
	20	Moral Hazard, Moral Hazard and Adverse Selection	3	
	21	Signalling	2	
	22	Incentives	1	
V	Application of Microeconomic Theories in India		12	
		Discussion based on welfare effects of pollution and environmental degradation in India		
		Practical Assignments on calculation of producer and consumer welfare in a given market		
		Seminar on how changes in policy alter the market equilibrium and impact social welfare		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Varian, H. R. (2014). *Intermediate Microeconomics with Calculus: A Modern Approach: International Student Edition*. W. W. Norton & Company. (All modules)

ADDITIONAL READINGS

1. Mas-Colell, A., Whinston, M. D., & Green, J. R. (2018). *Microeconomic Theory*.
2. Munoz-Garcia, F. (2017). *Advanced Microeconomic Theory: An Intuitive Approach with Examples*. MIT Press.

3. Schotter, A. (2009). *Microeconomics: A Modern Approach*.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	-	-	-	3	2	-
CO 3	-	-	-	-	-	-	2	3	-
CO 4	-	-	-	-	-	-	3	-	-
CO 5	-	-	-	-	-	-	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5			✓	

Programme	B.A. Economics				
Course Title	HETERODOX ECONOMICS				
Type of Course	Major				
Semester	VIII				
Academic Level	400 – 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Advanced economic course on Microeconomics, Macroeconomics and Development Economics of 300 – 399 level				
Course Summary	This course intends to provide an alternative perception to the economic theories, principles and concepts.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the alternative approach to economics	U	C	Instructor-created exams / Practical Assignment
CO2	Understand the various theories of value and the heterodox theories of distribution.	U	C	Assignments / Quiz
CO3	To discern the micro-macro links from the perspective of heterodox economics.	Ap	P	Observation of Practical Skills / Group Discussion
CO4	To view aggregation problems from a different perspective and redefine welfare accordingly	Ap	P	Observation of Practical Skills / Home Assignments
CO5	Use systemist framework to evaluate real-world economic problems and issues.	E	P	Group Discussion / Instructor-created exams
CO6	To explore feminist, ecological and radical discourses.	E	P	Group Discussion / Practical Assignment Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	A Heterodox View of the Economy		8	12
	1	What is heterodox economics?	1	
	2	Evolution of heterodox economics	2	
	3	From classical political economy to neoclassical economics	1	
	4	From classical political economy to heterodox economics	1	
	5	Heterodox economic theory and the social provisioning process.	3	
II	Module 2: Heterodox Theories of Value		10	14
	6	Theory of Value by Adam Smith	2	
	7	Ricardo's conception of value	2	
	8	Marxian approach to value	2	
	9	Sraffa's approach	4	
III	Module 3: Heterodox Theories of Distribution		15	22
	10	Recent developments in heterodox theories	3	
	11	Classical and Marxian theory	3	
	12	Cambridge theory	2	
	13	Neo-Kaleckian theory	2	
	14	The functional-size distribution nexus - Different sectors and different classes	2	
	15	Econo-physics and the 'two-class theory of income distribution'	3	
IV	Module 4: Micro- Macro link in Heterodox Economics		15	22
	16	Aggregates and aggregation in science	2	
	17	<i>A heterodox perspective on the micro-macro link: The whole is more than the sum of its parts</i>	3	
	18	Relations matter: There is real novelty	2	
	19	Aggregation and Welfare	2	
	20	Systemism as a general frame work	2	
	21	Systemism and heterodoxy - key ideas and concepts	2	
	22	Heterodox economics in a systemist framework	2	
	V	Open Ended Module		
		Discussion based on Feminist Economics, Ecological Economics and Radical Economics		
		Seminars to discuss and evaluate the state of affairs and policy related to women and ecology.		
		Group discussion and Assignments to understand radical economics.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22

units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Jo, T., Chester, L., & D’Ippoliti, C. (2017). *The Routledge Handbook of Heterodox Economics: Theorizing, Analyzing, and Transforming Capitalism*. Routledge.

ADDITIONAL READINGS

1. Mearman, A., Berger, S., & Guizzo, D. (2019). *What is Heterodox Economics?: Conversations with Leading Economists*. Routledge.
2. Lee, F. (2009). *A history of heterodox economics: Challenging the mainstream in the twentieth century*. Routledge.
3. Hermann, A., & Mouatt, S. (2020). *Contemporary issues in Heterodox Economics: Implications for Theory and Policy Action*. Routledge.
4. Armstrong, P. (2020). *Can heterodox economics make a difference?: Conversations With Key Thinkers*. Edward Elgar Publishing.
5. Harvey, J. T., & Garnett, R. F. (2008). *Future directions for heterodox economics*. University of Michigan Press.
6. Lee, F. S., & Lavoie, M. (2012). *In defense of Post-Keynesian and heterodox economics: Responses to Their Critics*. Routledge.

MAPPING OF COS WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	2	-	-
CO 2	3	-	-	-	-	-	2	-	-
CO 3	-	-	-	-	-	-	3	2	-
CO 4	-	-	-	-	-	-	-	3	2
CO 5	-	-	-	1	1	-	2	3	-
CO 6	-	3	-	-	-	-	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5	✓	✓		✓
CO 6		✓	✓	

Programme	B.A. Economics				
Course Title	METHODS FOR QUANTITATIVE RESEARCH IN ECONOMICS				
Type of Course	Major				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites					
Course Summary	This course provides a comprehensive foundation in research design and statistical analysis techniques for economic research, covering topics such as research methodology, data collection methods, statistical analysis, software applications, and advanced topics including regression analysis and econometrics, with a focus on ethical considerations throughout the research process.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Demonstrate a solid understanding of the fundamental principles of research design, including different types of research methodologies and sampling techniques.	U	F	Instructor-created exams / Quiz
CO2	to apply various statistical analysis techniques, such as hypothesis testing, regression analysis, and econometric methods, to real-world economic research problems	Ap	P	Practical Assignment
CO3	critically analyze research problems, identifying gaps in existing literature, formulating meaningful research questions, and selecting appropriate research designs to address these questions.	E	F	Seminar Presentation / Group Discussion
CO4	Synthesize information from various sources, including primary and secondary data, to create well-constructed and logically organized research proposals and projects.	Ap	P	Instructor-created exams / Home Assignments
CO5	Evaluate the reliability and validity of research findings, interpret statistical results, and communicate their research effectively through written reports and presentations. They will also.	E	C	Instructor-created exams / Home Assignments

CO 6	Create comprehensive research projects that demonstrate a mastery of quantitative research methods in the field of economics	Ap	P	
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Foundations of Research Design		12	18
	1	Introduction to Research Methodology - Definition and importance of research	2	
	2	Types of research- exploratory, descriptive, explanatory	1	
	3	Research Problem Formulation: Literature review - Identifying research gaps - Developing research objectives and hypotheses	2	
	4	Research Design and Types - Experimental vs. non-experimental designs - Cross-sectional vs. longitudinal designs - Quasi-experimental designs	3	
	5	Sampling Techniques - Probability and non-probability sampling methods- Sample size determination	3	
	6	Sampling errors and biases	1	
II	Data Collection Methods		12	16
	7	Survey Research - Questionnaire design and construction -	2	
	8	Sampling in surveys – Pilot survey - Survey administration and data collection	3	
	9	Validity and Reliability – Test of Validity and reliability	2	
	10	Randomized control trials - Experimental and control groups	2	
	11	Secondary Data - Utilizing existing datasets	2	
	12	Ethical considerations in data collection	1	
III	Statistical Analysis Techniques		12	18
	13	Descriptive Statistics - Frequency distributions - Graphical representation of data	3	
	14	Inferential Statistics - Hypothesis testing- Confidence intervals - t-tests, ANOVA, ANCOVA,	3	
	15	Correlation Regression analysis.	2	
	16	Data Interpretation - Communicating statistical findings effectively - Presentation: Creating visualizations and tables	4	
IV	Software Applications and Advanced Topics		12	18
	17	Introduction to Statistical Software - Familiarisation of software like R /Python/SPSS	3	
	18	Data import, cleaning and basic analysis	1	
	19	Advanced Regression Analysis - Multiple regression - Logistic regression Model diagnostics	3	
	20	Econometrics in Economic Research - Time-series analysis	2	

	21	Panel data analysis- Instrumental variable methods.	2	
	22	Research ethics.	1	
V	Open Ended Module		12	
		Discussion: Identify a research paper (Qualitative research work)		
		Practical Assignments: Review of various research works and identify different research methods		
		Seminar: Prepare a research proposal and present it		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. "Research Methodology: A Step-by-Step Guide for Beginners" by Ranjit Kumar New age international Publishers.
2. Research Methodology in Social Sciences Paperback by Shridhar Patil & Aditya - New India Publishing Agency
3. Methodology of Research In Social Sciences, Krishnaswamy, O.R. Himalya publishing House,
4. Research Methodology in Social Sciences" by Devendra Thakur Deep & Deep Publications

ADDITIONAL READINGS

1. Bryman, A. (2016). Social Research Methods. Oxford University Press.
2. Bordens, K. S., & Abbott, B. B. (2002). Research design and methods: A process approach. McGraw-Hill.
3. Bairagi, V., & Munot, M. V. (Eds.). (2019). Research methodology: A practical and scientific approach. CRC Press.
4. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	-	-	-	-	-	-	-	3	
CO 3	-	-	-	3	-	-	-	-	2
CO 4	-	-	-	-	-	-	3	1	-
CO 5	-	-	-	-	-	2	-	-	2
CO6	-	-	-	-	-	-	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	METHODS FOR QUALITATIVE RESEARCH IN ECONOMICS				
Type of Course	Major				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites					
Course Summary	This course provides a comprehensive overview of qualitative research methods in economics, covering topics such as philosophical foundations, research design, sampling, data collection techniques, analysis techniques, interpretation, and advanced topics including ethical considerations and the integration of qualitative methods with big data approaches.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Articulate the philosophical foundations of qualitative research, distinguishing between post-positivism, critical realism, and constructivism.	U	F	Instructor-created exams / Quiz
CO2	Conduct data analysis skillfully, through advanced approaches like discourse analysis and ethnographic content analysis, synthesizing information from diverse sources.	An	P	Practical Assignment
CO3	Critically evaluate ethical challenges in advanced qualitative research designs and assess the strengths and limitations of various qualitative methods.	E	F	Seminar Presentation / Group Discussion
CO4	Proficiently design and justify complex qualitative research studies utilizing advanced methodologies such as multi-method approaches and case studies.	Ap	P	Instructor-created exams / Home Assignments
CO5	Produce an original publishable-quality research paper, creatively applying emerging trends in qualitative research, including big data and digital ethnography.	Ap	F	Instructor-created exams / Home Assignments

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
 # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	
I	Introduction to Qualitative Research in Economics		16	22
	1	Overview of Research Methods – Quantitative and qualitative strength and limitations of Qualitative research.	2	
	2	Philosophical Foundations - Understanding ontology and epistemology in qualitative research - Positivism - constructivism – Critical realism	3	
	3	Review of literature	2	
	4	Formulation of research problem - Identification conceptualization and operationalization of the problem	3	
	5	Research Design in Qualitative Research - Defining research questions and objectives	3	
	6	Choosing appropriate qualitative research designs - Case study, grounded theory, ethnography, and phenomenology	3	
II	Sampling and Data Collection Techniques in Qualitative Research		12	18
	7	Sampling methods: Purposeful sampling technique- Snowball sampling - Critical case sampling-Theoretical sampling.	3	
	8	Data collection methods: In-Depth Interviews - Focus Group Discussions - Observation	3	
	9	Document Analysis -Examining primary and secondary sources	2	
	10	Multi method approach	2	
	11	Case study approach	2	
III	Data Analysis in Qualitative Research		10	15
	12	Techniques: Thematic analysis - Content analysis - Constant comparative analysis	2	
	13	Coding and categorization- Discourse analysis- Narrative analysis.	2	
	14	Scaling Techniques: Likert Scale – Thurstone scale – Guttman scale	2	
	15	Introducing Qualitative Data Software	2	
	16	Interpretation and Writing	2	
	17	Hermeneutics. The role of theory in qualitative research in economics	2	
IV	Advanced Topics in Qualitative Research in Economics		10	15
	18	Recent trends and issues in Qualitative research	2	
	19	Power Dynamics And reflexivity	2	
	20	Big data and qualitative Research methods	2	
	21	Ethical considerations specific to qualitative research.	2	
	22	Evaluating the impact of economic policies	2	

V	Open ended module		12	
		Discussion: Identify a research paper (Qualitative research work)		
	Practical Assignments: Preparation of interview Shedule/ questionnaire			
	Seminar: Review a research paper and present it			

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

5. Qualitative research methods in economics: A practical guide. **Uwe Flick** -Sage Publications Ltd.
6. Research Methodology in Social Sciences Paperback by Shridhar Patil & Aditya - New India Publishing Agency
7. Krishnaswamy, O.R. Methodology of Research In Social Sciences, Himalya publishing House, 1993

ADDITIONAL READINGS

5. Bryman, A. (2016). Social Research Methods. Oxford University Press.
6. Bordens, K. S., & Abbott, B. B. (2002). Research design and methods: A process approach. McGraw-Hill.
7. Bairagi, V., & Munot, M. V. (Eds.). (2019). Research methodology: A practical and scientific approach. CRC Press.
8. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	1	1	-	-	-	-	-	-	-
CO 2	-	-	-	3	-	-	-	2	
CO 3	-	-	-	-	-	-	3	-	2
CO 4	-	-	-	-	-	-	-	3	-
CO 5	-	-	-	-	-	2	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Elective Courses in Economics

Programme	B.A. Economics				
Course Title	GENDER ANALYSIS IN ECONOMICS				
Type of Course	Elective				
Semester	V				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 200 – 299 level				
Course Summary	This course provides a detailed understanding of gender equality, gender empowerment strategies, and social security policies that promote gender well-being.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts of gender and gender economics and to recognise the gender mainstreaming initiatives.	U	C	Instructor-created exams / Quiz/Assignment
CO2	Examine the peculiarities, role and challenges of gender in the labour market participation	E	C	Instructor-created exams / Practical Assignment / Observation of Practical Skills
CO3	Analyse the basic tools of gender Economics	An	P	Instructor-created exams / Seminar Presentation / Group Discussion
CO4	Develop the attitude and ability to preserve the concept of women empowerment and gender equality in the society.	Ap	P	Instructor-created exams / Home Assignments
CO5	Suggest and practice certain measures for protecting gender equality and gender well being	Ap	P	Writing assignments/Survey/Debate
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Gender Economics		12	17
	1	Concepts of gender and sex-Femininity and masculinity	1	
	2	Definition and Scope of Gender Economics	1	
	3	Historical Milestones of Gender Mainstreaming - Global perspective (UNDP measures, UN SDGs, CEDAW etc)	2	
	4	Gender Main streaming efforts in India-73 rd and &74 th amendments of Indian constitution, Gender budgeting, Beti Bachao Beti Padhao, Mahila Shakti Kendra, The National Crèche Scheme, Pradhan Mantri Matru Vandna Yojna, Pradhan Mantri Ujjwala Yojana, Sukanya Samridhhi Yojna (SSY), Skill Upgradation & Mahila Coir Yojna etc.	3	
	5	Gender mainstreaming efforts of Local self-government- WCP, GRC, Jagratha Samithi, Kudumbasree,etc.	1	
	6	Transgender policy of India and Kerala	1	
	7	Demography of female population in India-Age structure, mortality rates, Inter-state variations in sex ratio, Causes of declining sex ratio, Measurement of fertility and its control	3	
II	Gender and Labour Market		12	17
	8	workforce participation across Gender –Basic Statistics (world &India), Contribution of Claudin Goldin-U shape Curve	3	
	9	Challenges in informal and Formal Economy–Gender Discrimination and Exploitation in the Labour Market	2	
	10	Time use and Indian Time Use survey (1999-2000& 2019) for assessing women’s labour at home and workplace	3	
	11	Women’s Contribution to National Economy in terms of sectoral shares in GDP and employment	2	
	12	Impact of technology and modernization on women’s work participation	1	
	13	Effects of globalization and liberalization on women	1	
III	Tools for Gender Economics		10	15
	14	Gender Planning-Definition, importance, process and stakeholders	3	
	15	Gender Budgeting: Definition, Importance, process and stakeholders	3	
	16	Gender Auditing: Definition, Importance and process	4	
IV	Tools for Women Empowerment		14	21
	17	Women and education- GER ratio in India -Addressing gender inequalities in education	3	
	18	Gender equity in health-access to nutrition	2	
	19	Women’s participation in decision making	2	
	20	Gender equity in Assets -Protection of property rights	2	
	21	Crimes against women in India-Basic statistics	3	
	22	Schemes for safety net for women	2	
V	Open Ended Module		12	
	1	Perform Gender auditing of a leading institution		
	2	Discuss the reasons for increasing women crimes in Kerala		
	3	Gender-based discrimination in assets: carry out a local survey		

	4	Student led seminar on national and international laws for women's rights		
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Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Sen, Sujatha (2012), *Gender Studies*- Dorling Kindersley (India) Pvt.Ltd, New Delhi
2. Krishna Raj .M, Sudarshan.R.M, and Shariff.A (1999), *Gender, Population and Development*, Oxford University Press, New Delhi
3. Ellina Samantroy (2022), *Women's Paid and Unpaid Work: Insights from the Time Use Survey and Methodological Issues*, V.V. Giri National Labour Institute, Noida, U.P.

ADDITIONAL READINGS

1. Sen, Suvarna (2006), *Gender and Development*, ICFAI University Press, Hyderabad.
2. Dutta, Nandita and, Sumitra Jha (2014), *Women and Rural Development*, Pacific Books International Delhi.
3. Jitendra Ahirrao (2013), *Entrepreneurship and Rural Women in India*, New Century Publications, New Delhi.
4. A. Venkateswarlu, et al. (2013), *Dimensions of Female Sex Ratio: Interstate Variations in India*, Serials Publications, New Delhi.
5. Desai, N and M.K Raj (1974), *Women and Society in India*, SNDT University, Mumbai.
6. Sen, Amartya. (1990), *More than 100 million Women are Missing*, New York Review of Books, vol.37, No.20, 1990.
7. Govt.of India (2009), *Gender Equality and Women Empowerment in India*, National Family Health Survey 2005-06 (NFHS-3), IIPS, Mumbai.
8. John Mary. E (1996), *Gender and Development in India*, EPW, 31(47), PP 3071-77).
9. Pal, Manoranjan et.al (Ed) (2011), *Health, Nutritional Status and Role of Women in India*, Oxford University Press, New Delhi.
10. E Boserup (1970), *Women's Role in Economic Development*, George Allen and Unwin, London.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	2	-	-	-	-
CO 2	1	2	-	3	-	-	2	-	-
CO 3	-	-	1	3	-	-	2	-	-
CO 4	-	-	-	2	-	-	3	2	-
CO 5	-	-	-	-	-	2	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar/ Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	ENVIRONMENT AND SUSTAINABLE DEVELOPMENT				
Type of Course	Elective				
Semester	V				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 200 – 299 level				
Course Summary	This course explores the relationship between environment and economy and through which students put forward various sustainable development models				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept of environmental economics and its importance	U	C	Instructor-created exams / Quiz
CO2	Analyze various theories on environmental economics and related concepts	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Evaluate the problem of pollution	U	P	Seminar Presentation / Group Discussion
CO4	Apply the theoretical knowledge in reducing environmental degradation	Ap	C	Instructor-created exams / Home Assignments
CO5	Assess various environmental issues	U	F	Writing assignments
CO6	Create/ suggest various sustainable development models	Ap	P	Visiting and writing reports
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Unit	Content	Hrs	Marks	
I	Environment and Economy		12	17
	1	The Environment and Economy- meaning and scope of environmental economics-	3	
	2	Major environmental problems, types of pollutions, Global warming and Ozone depletion.	3	
	3	The environmental Kuznet curve-	3	
	4	Limit to growth theory- Green GDP	3	
II	Externalities and Regulations		15	22
	5	Market failure and causes	2	
	6	Kinds of Externalities	1	
	7	Negative externalities and inefficiency	1	
	8	Positive externalities and inefficiency	1	
	9	Regulating externalities -prices- Fixing Emission standard and Emission Fees, Tradeable emission permits, recycling	4	
	10	Pigouvian taxes	1	
	11	Optimum level of pollution control	2	
	12	Property rights and Coase Theorem	3	
III	Measuring Environmental Values		10	15
	13	Environmental impact assessment- preventive expenditure technique- replacement cost technique- travel cost method-contingent valuation	4	
	14	National income accounting for the environment	2	
	15	The harvesting of renewable resources and maximum sustainable yield	2	
	16	Non-renewable resources and optimal depletion	2	
IV	Sustainable Development		11	16
	17	Sustainable development: concepts and practices- measurement	4	
	18	Earth summits	1	
	19	Sustainable developmental goals	1	
	20	Agenda 21	1	
	21	Sources and use of non-conventional and renewable energy	2	
	22	Organic farming	2	
V	Open ended Module		12	
		Report on waste management by visiting local dumping yards of the local self-governments- report should contain the assessment and measurement of pollution- suggestion to reduce the problems related to waste management. or Visit organic farm houses and make report on its economic side		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-

ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, is only for the external examination.

REFERENCE:

1. Charles D Kolstad, (2010). *Intermediate environmental economics*, 2nd ed. Oxford University Press.
2. Robert Pindyck and Daniel Rubinfeld, (2019). *Micro Economics*. Pearson, 8, 657-671
3. A.P. Thirlwall, *Growth and Development*, 8th Edition, Palgrave, macmillan.
4. T. Eugin, (2014). *Environmental economics*, Vrindavan publications, Delhi

ADDITIONAL READINGS

1. Aldy, J. et al. (2010). Designing climate mitigation policy. *Journal of Economic Literature*, 48, 903-934.
2. Cropper, M., Oates, W. (1992). Environmental economics: A survey, *Journal of Economic Literature*, 30, 675-740.
3. Heal, G. (2012). Reflections – defining and measuring sustainability. *Review of Environmental Economics and Policy*, 6, 147-163.
4. Newell, R., Pizer, W., Raimi, D. (2013). Carbon markets 15 years after Kyoto: Lessons learned, new challenges. *Journal of Economic Perspectives*, 27, 123- 46.
5. Perman, R., Ma, Y., Mc Gilvray, J., Common, M. (2011). *Natural resource and environmental economics*, 3rd ed. Pearson Education/Addison Wesley.
6. Stavins, R. (ed.) (2012). *Economics of the environment: Selected readings*, 5th ed. W. W. Norton

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2
CO 3	3	-	-	1	-	-	-
CO 4	-	3	1	2	-	-	3
CO 5	3	-	-	-	-	-	2
CO 6	-	2	2	3	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ECONOMIC DATABASE MANAGEMENT				
Type of Course	Elective				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Intermediate Level Economics Courses of 200 – 299 level				
Course Summary	Explore the intersection of economics and database systems, covering data sources, case studies, and economic analysis.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the fundamentals of database management and its importance in economics	U	C	Instructor-created exams / Quiz
CO2	Learn how to query a database to extract relevant economic data	U	C	Seminar Presentation / Group Discussion
CO3	Check reliability and quality of data	E	P	Seminar Presentation / Group Discussion
CO4	Comparison of different data sources	An	P	Instructor-created exams / Home Assignments
CO5	Develop skills in data analysis using database tools and technologies	Ap	P	Practical Assignment / Observation of Practical Skills
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to sources of data		15	22
	1	An introduction to the role of data in economic history -the physiocrats- Quesnay- Hume- William Petty- Kuznets	5	
	2	Modern data sources	2	
	3	Scale of measurement	2	
	4	Data transformations; level v/s growth rates	2	
	5	Sources of data	1	
	6	Data reporting delay	1	
	7	Length of data	1	
	8	Accuracy of data	1	
II	India's specific data sources		15	22
	9	The role of National Sample Survey Organisation	1	
	10	Central statistical organization	1	
	11	Annual Survey of Industries	1	
	12	RBI- Handbook of Statistics on Indian Economy	2	
	13	SEBI handbook of statistics	2	
	14	Data set- Employee Provident Fund Organization	2	
	15	Ministry of Corporate affairs	2	
	16	Database on Indian economy - Census dataset- open government data platform in India	2	
17	National family health survey	2		
III	Global data sources		8	12
	18	UN data- monthly -Monthly bullets of statistics-SDG indicators- UN comtrade data base-UN conference on trade and development- Climate change indicators- dashboard	4	
	19	International financial statistics- financial access survey- government finance statistics- the World bank data catalogue- the global index data base- Federal Reserve economic data base (FRED)	4	
IV	Case studies and controversies		10	14
	20	The minimum wage controversy-the backward bending supply curve for labour- GDP calculation-Inflation Calculation-Purchasing Power Parity calculations	4	
	21	Reinhart-ROGOFF controversy- public data manipulation	3	
	22	Greece's public deficit figures-controversies about Argentina's inflation statistics- the Brazilian fiscal pedaling- limitations of publicly available data (case studied of relevant economies)	3	
V	Open ended module		12	
		Discussion on reliability of data from different sources		
		Practical Assignments to extract data from various sources		
		Seminar on the influence and value of data-based evaluation of different schemes, situations and problems		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Koop, Gary. Analysis of economic data. John Wiley & Sons, 2013. (All modules)

ADDITIONAL READINGS

1. Kirkpatrick, Charles D. Time the Markets: Using Technical Analysis to Interpret Economic Data. FT Press, 2012.
2. Winston, Wayne L. Data Analysis and Business Modeling with Microsoft Excel. Microsoft Press, 2004.
3. Gujarati, Damodar N., and Dawn C. Porter. Basic econometrics. McGraw-hill, 2009.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	-	-	2	-	-	2	-	1
CO 3	-	-	-	-	-	-	3	1	-
CO 4	3	-	-	1	-	-	-	-	-
CO 5	-	-	-	3	-	-	-	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5			✓	

Programme	B.A. Economics				
Course Title	ECONOMICS OF LABOUR MARKET				
Type of Course	Elective				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites	Course on Microeconomics and Macroeconomics of level 200 - 299				
Course Summary	This course explores the intricate dynamics of labour markets, providing students with a comprehensive understanding of the functioning of labour markets, and covering fundamental concepts, historical development, labour market outcomes and contemporary issues.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concept of labour economics, labour markets and labour force participation.	U	C	Instructor-created exams / Quiz
CO2	Analyze theories of labour supply, labour demand and wage discrimination	An	P	Practical Assignment
CO3	Evaluate wage determination in different market conditions and the impact of labour unions	E	F	Seminar Presentation / Group Discussion
CO4	Apply the theories and contribute to better labour market outcomes.	Ap	P	Instructor-created exams / Home Assignments
CO5	Create critical thinking on labour unions, collective bargaining and Govt Employment Programmes	Ap	F	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Labor Market and Labour Supply		10	14
	1	Labour Market and the Economy - Unique features of Labour market	1	
	2	Evolution of Labour Market Theory-Labour market Process.	2	
	3	Labour Supply-The Theory of Labour/Leisure Choice-Income taxes and Labour supply	2	
	4	Supply of Salaried and Contract Labourers- Labour Supply Curve.	2	
	5	Labour Force Participation- Its Measurement-Convergence of Participation Rates	3	
II	Labour Demand		15	23
	6	Demand for Labour in the Short Run -Marginal Productivity Theory of Labour Demand with its criticisms	3	
	7	Product Demand and Labour Demand	1	
	8	Short-run Equilibrium in Labour Demand	2	
	9	Elasticity of Demand for Labour	3	
	10	Demand for Labour in the Long Run- Long Run Equilibrium -	2	
	11	Determinants of Elasticity of Labour Demand-Technological Change and Labour Demand.	4	
III	Wage Determination, Wage Differential and Discrimination		15	23
	12	Wage Determination in Competitive Markets-Law of One Wage	1	
	13	Wage Determination in Monopsony Market	1	
	14	Minimum wage	1	
	15	Efficiency wage Theory	2	
	16	Compensating Wage Differentials	1	
	17	Hedonic Theory of Compensating Wage Differentials	1	
	18	Economics of Employee Benefits	1	
	19	Issues of Occupational Segregation-Duncan Index	3	
	20	Discrimination in the Labour Market-Theories of Labour Market Discrimination -Measurement of Discrimination.	4	
IV	Union Membership and Collective Bargaining		8	10
	21	Type of Labour Unions- The Determinants of Union Membership: Demand and Supply Model -Equilibrium level of Union Membership.	4	
	22	The Union-Management Bargaining Process-Contract Zone-Union and Employer Reaction Function-Bargaining Process Outcomes	4	

V	Open ended module		12
		Discussion: Measurement, Types of Unemployment and Causes of Unemployment	
		Practical Assignments on Unemployment Statistics of India and Kerala	
		Seminar on Government Employment Programmes	

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Kaufman, B.E (2003). The Economics of Labour Markets. Thomson South Western (Module I, II, III, and IV)

ADDITIONAL READINGS

1. Borjas, G.J. (2020). Labour Economics. McGraw-Hill.
2. Boeri, T., & Ours, J. (2008). The Economics of Imperfect Labor Markets, Princeton University Press
3. Junankar, P. (2016). Economics of Labour Market. Palgrave.
4. Sapsford, D., & Tzannatos, Z. (1993). The Economics of Labour the Market.
5. Fine, B. (1998). Labour Market Theory: A Constructive Reassessment. Routledge.
6. McConnell, C., Brue, S., & Mac, D. (2017). Contemporary Labour Economics. McGraw-Hill Education
7. State planning Board, Economic Review, Thiruvananthapuram
8. <https://mospi.gov.in/nssso-reports>
9. <https://dbie.rbi.org.in/#/dbie/home>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO 9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	3	-	2	1	-	2	-	-
CO 3	-	3	-	2	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	3	-
CO 5	-	3	-	2	-	-	1	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	HEALTH ECONOMICS				
Type of Course	Elective				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites	Microeconomics course of 200 – 299 level				
Course Summary	This course seeks basic information about health economics, supply and demand for health care, Health Insurance and Economic Evaluation of Health Interventions.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts of health economics.	F	C	Instructor-created exams / Quiz
CO2	Comparison of determinants of demand and supply of health care.	An	P	Practical Assignment
CO3	Able to evaluate proper health insurance policies	Ap	F	Seminar Presentation / Group Discussion
CO4	Able to track down emerging health interventions in the international, national and state level	Ap	C	Instructor-created exams / Home Assignments
CO5	Create the opportunity to develop awareness regarding health care around us	E	M	Viva
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	INTRODUCTION TO HEALTH ECONOMICS		12	19
	1	Definition and scope of health economics	1	
	2	Significance of Health Economics	1	
	3	Essential features of health economics	1	
	4	health indicators-mortality, morbidity, birth rate, death rate, IMR, CMR, MMR, Disability Adjusted Life year (DALY), Quality Adjusted Life Year (QUALY)	5	
	5	Sex ratio	1	
	6	Value of life; Determinants of good health	1	
	7	Measurement of health status.	2	
II	SUPPLY AND DEMAND FOR HEALTH CARE		15	23
	8	Demand and Supply of health care	1	
	9	Characteristics of demand and supply of health	1	
	10	Demand for health and demand for medical care.	3	
	11	Nature of demand for health- Determinants of demand for health	2	
	12	Supplier induced demand; health as a form of capital.	3	
	13	Supply of health care-Determinants of supply of health care	2	
	14	Pricing of health care.	3	
III	MARKET FOR HEALTH INSURANCE		10	14
	15	Economics of health insurance- Demand for health insurance	1	
	16	setting insurance premium	1	
	17	Insurance concepts -Co-payments. Co-insurance rates, deductibles. Method of pricing insurance;	3	
	18	Health insurance challenges: Information asymmetry – Adverse selection -Moral hazard;	3	
	19	Private vs social health insurance.	2	
IV	ECONOMIC EVALUATION OF HEALTH INTERVENTIONS		11	14
	20	Evaluating Health Intervention- Direct and indirect costs of healthcare	2	
	21	Issues in the measurement of cost; Purpose and methods of evaluating a health intervention	4	
	22	Health policy of WHO - National health policy- NRHM- Health as a State subject.	5	
V	Open Ended Module		12	
	1	An overview of the health scenario in India and Kerala		
	2	Indian health care sector; Health Scenario in India and Kerala- issues – Kerala model of health.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. V Ramankutty- A Premier of Health System Economics (2007)

ADDITIONAL READINGS:

1. Dewar Dianne M (2010): Essentials of Health Economics, Jones and Bartlett Publishers,
2. Feldestein Paul J (1999): Health Economics, Albany, NY: Delmar Publication Learning
3. Getzen Thomas E (2013) : Health Economics and Financing, Wiley
4. Park K (2011): Preventive Medicine, Banarsidas Bhanot Publications, Jabalpur.
5. Phelps Charls E (2016): Health Economics, Routledge, New York Dewar MDiane :Essential of Health Economics
6. Santre E Rexford and Neun Stephen : Health Economics: Theory, Insights and Industry Studies, South Western Cengage Learning
7. V Ramankutty- A Premier of Health System Economics (2007)
8. Kannan K P,et al (1991)- Health Development in Rural Kerala-(KSSP,Thiruvanthapuram).
9. Henderson J W- Health Economics and Policy -Thomson Learning.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO 9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	-	-
CO 3		2	-	2	-		-	2	-
CO 4	-	3	2	3	-	2	3	3	2
CO 5	3	-	-	-	-	2	2	1	1

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	HUMAN CAPITAL AND ECONOMIC DEVELOPMENT				
Type of Course	Elective				
Semester	V				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Course on Intermediate Economics of level 200 - 299				
Course Summary	This course explores the intersection between development economics and the economics of human capital				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the relationship between human capital and economic development	U	C	Instructor-created exams / Quiz
CO2	Analyze the various theories of human capital and economic development	An	P	Practical Assignment
CO3	Evaluate the different theoretical models	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the theoretical models to real situations	Ap	C	Instructor-created exams / Home Assignments
CO5	Create empirical research models	C	P	Viva
CO6				
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		10	15
	1	Human Capital : Definition and Concepts	2	
	2	Relation between Human Capital and Economic Development	2	
	3	Measurement of Human Development	2	
	4	HDI and India	2	
	5	Problems of Human Capital Formation	2	
II	Theoretical Aspects		12	20
	6	Solow Model and Effective Capital	2	
	7	Convergence Hypothesis	2	
	8	Solow Residual	2	
	9	Research on Human Capital and Economic Growth	3	
	10	India's Experience	3	
III	Advanced theories		12	20
	11	Theoretical models on Human capital and Economic Growth	3	
	12	Human Capital formation	2	
	13	Endogenous growth models	2	
	14	Multiple equilibrium and Non-linearity in Human Capital and Economic growth	3	
	15	Overlapping Generations model- Paul Samuelson & Peter Diamond	2	
IV	Empirical Aspects		14	15
	16	The Empirics	2	
	17	Linear and Non-linear Specifications	2	
	18	Non –parametric method and their application	2	
	19	Migration and regional economic growth	3	
	20	Demographic characteristics and economic growth	2	
	21	Economic Policy and Human capital	2	
	22	Human Capital and Development experiences of Kerala	1	
V	Open Ended Module		12	
		Assignments, Empirical studies, Problem Discussion		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Andreas Savvides and Thanasis Stengos: Human Capital and Economic Growth:Stanford University Press 2009
2. A . P Thirlwall: Growth and Development
3. Michael P Todaro and Stephen C Smith:Economic Development
4. N Gregory Mankiw: Macro Economics

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	2	-	-
CO 2	-	-	-	2	-	-	2
CO 3	-	2	-	2	-	-	3
CO 4	-	2	-	1	1	-	3
CO 5	-	2	-	1	-	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	INDUSTRIAL ECONOMICS				
Type of Course	Elective				
Semester	VI				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics course of 200 – 299 level				
Course Summary	This course is designed to explore the basic concepts, nature and scope, theories and practices of industrial economics in a cogent and analytical manner particularly in the Indian context.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Identify the basic concepts and scope of Industrial Economics	U	C	Instructor-created exams / Quiz
CO2	Analyse the different forms of organisation and its motives	An	C	Instructor-created exams /Practical Assignment
CO3	Examine the general determinants and approaches of industrial location and explore the motives of mergers and acquisition	An	C	Instructor-created exams/ Seminar Presentation / Group Discussion/
CO4	Evaluate the major source of industrial finance, financial statements, Ratio analysis and break-even analysis procedures in the Indian context.	E	p	Instructor-created exams / Home Assignments/ Practical Assignment
CO5	Analyse basic investment decisions on the basis of project evaluation methods and cost benefit analysis	An	p	Instructor Created exams/Practical Assignment /Writing assignments
CO6	Access industrial practices prevailing in India on the basis of Industrial policy 1991, Labour rules, Industry innovations, Special economic zone, Ratio analysis and break-even point calculation etc	Ap	P	Debate/panel discussion/ survey /Assignments
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge(C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Basics and Scope of Industrial Economics		12	15
	1	Nature and Scope of Industrial Economics	1	
	2	The organizational form and alternative motives of the firm	3	
	3	The concept of Production function and optimal input	3	
	4	Efficiency and Size of the firm	3	
	5	The effect of Firm size on other performance indicators and conduct	2	
II	Industrial Location Analysis		12	15
	6	The General determinants of industrial location	1	
	7	Geographical approaches to industrial location	3	
	8	Economic theories of industrial location	4	
	9	Operational approaches to industrial location	1	
	10	Industrial location trends in India	1	
	11	Concepts and motives for industrial diversification, vertical integration and mergers	2	
III	Industrial Finance and Accounting		12	20
	12	Types of finance and Sources of Industrial Finance (internal and external)	2	
	13	Contribution of various sources of finance in Indian Situation	2	
	14	Basic accounting procedure and financial statements (balance sheet and Profit & Loss account only)	3	
	15	Assessment of Financial soundness and Ratio analysis	3	
	16	Breakeven analysis and its application in financial management	2	
IV	Investment Decisions		12	20
	17	Nature and types of Investment decisions	1	
	18	Preparation of time profile of a project	2	
	19	Methods of project evaluation	4	
	20	Ranking of projects: NPV vs IRR	1	
	21	Risk and uncertainties in project proposal	2	
	22	Appraisal of public projects: social cost benefit analysis	2	
V	Open Ended Module		12	
	1	Conduct Student-led seminar on New Industrial policy 1991		
	2	Organize discussion on Industry and Innovation (Startup, Unicorn etc.		
	3	Conduct financial ratio analysis and breakeven analysis of selected companies		
	4	Organize a quiz competition on Labour rules in India		
	5	Panel discussion on Special Economic Zones: Progress and problems		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Barthwal, R.R (2018), *Industrial Economics*, 3RD Revised Edition, New Age International (p) Limited, New Delhi (Module 1,2,3,4&5)
2. Prasanna Chandra (1995), *Financial Management-Theory and Practice*- Tata McGraw Hill, New Delhi (Module 3&4)

ADDITIONAL READINGS

1. Hay D A and Morns D J (1979), *Industrial Economics: Theory and Evidence*, Oxford university Press
2. Roger Clarke (1985) *Industrial Economics*, Basil Blackwell, New York.
3. Smith D M (1971) *Industrial Location: An Economic and Geographic Analysis*- John Wiley, New York.
4. Francis Cherunilam (1994), *Industrial Economics: Indian Perspective*, Himalaya Publishing House, Mumbai.
5. Uma Kapila (2003), *Understanding the problems of Indian Economy*, Academic Foundation, New Delhi.
6. CDS: Balakrishnan P and Pushpangadan K (1994) Total Factor Productivity Growth in Indian Manufacturing: A Fresh Look- Working Paper No. 259, Thiruvananthapuram.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	1	2	-	2	-	-	-	-	-
CO 3	-	3	-	2	-	-	-	-	-
CO 4	-	-	-	3	-	-	-	2	-
CO 5	-	-	-	2	-	-	2	3	-
CO 6	-	-	-	-	-	-	2	3	

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Debate/ Discussion / Seminar/Survey
- Internal Exam
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	✓
CO 6			✓	

Programme	B.A. Economics				
Course Title	AGRICULTURAL ECONOMICS				
Type of Course	Elective				
Semester	VI				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 200 – 299 level				
Course Summary	This course provides an overview of the role of agriculture in the economic development, Economics of agricultural production, Pricing of agricultural products and the features associated to agricultural productivity and Marketing.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts and models of agricultural economics related to the economic development of a country	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Analyse the theoretical foundations and optimization strategies of economics of agricultural production	An	C	Instructor-created exams /Practical Assignment
CO3	Evaluate the behaviour of demand, supply and agricultural product price and judge the relevance of government intervention in the price fixation	E	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Demonstrate the structure and techniques of agriculture marketing in Indian context	An	C	Instructor-created exams / Home Assignments
CO5	Analyse the major issues related to Indian agriculture and suggest new policies to overcome the issues associated with the Indian agriculture.	An	P	Writing assignments/ Survey / Seminar/ presentation/ Group Discussion

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Agricultural Economics		12	20
	1	Meaning, Nature and Scope of Agricultural Economics.	2	
	2	Role of agriculture in economic development	1	
	3	Models of agricultural development (Schultz, Lewis, Fei & Ranis, Mellor, and Boserup)	5	
	4	Interdependence between agriculture and industry	1	
	5	Terms of trade between agriculture and industry	1	
	6	Types of farming	2	
II	Economics of Agricultural Production		18	25
	7	Application of production function in Agriculture- Increasing and decreasing production function, Law of variable proportion, and the application of Cobb-Douglas production function in Agriculture	4	
	8	Factor- Product relationship	2	
	9	Factor-Factor relationship	2	
	10	Product-Product relationship	2	
	11	General condition of equilibrium covering all the relationships	2	
	12	Farm budgeting approach	2	
	13	Size of the Farm and Productivity debate	2	
III	Behaviour of Demand, Supply and Agricultural prices		10	15
	15	Instability of agriculture-price instability, income instability, inelastic demand for and supply of agricultural products and measures for reducing instability in agriculture	2	
	16	Different views about supply response in agriculture	2	
	17	Objectives and elements of agricultural price policy	2	
	18	Features of an ideal agricultural price policy	2	
	19	Agricultural price policy in India and the need for revision of agricultural price policy in India	2	
IV	Agricultural Marketing		8	10
	20	Types of agricultural marketing	2	
	21	Efficiency of agricultural marketing and the measures to improve the efficiency of agricultural marketing in India	4	
	22	Measurement of marketable and marketed surplus	2	
V	Open Ended (Arrange any two activities)		12	
	1	Student led seminar on green revolution and ever green revolution		
	2	Discussion on rural unemployment and rural indebtedness		
	3	Assignment on land reforms and its impact on agriculture		
	4	Critically evaluate the role of WTO in Indian agriculture by analysing the reports related to World trade organisation and Indian agriculture		
	5	Organise a debate on Capital formation in Indian Agriculture-Public versus private investment		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Soni R N (2013), *Leading Issues in Agricultural Economics*, 10th Edition, Vishal publishing co. Jalandhar. (Module 1,2,3,4&5)
2. Gupta P K (2018), *Agricultural Economics*, 2ND Edition, Vrinda Publications (p)Ltd, Delhi. (Module 1,2,3,4&5)

ADDITIONAL READINGS

1. S. Subba Reddy, P. Raghu Ram, T.V. Neelakanta Sastry and I. Bhavani Devi (2012) *Agricultural Economics*, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi
2. S.A.R Bilgrami (2011), *An Introduction to agricultural Economics*, 2ND Edition, Himalaya publishing house, Mumbai.
3. Majumdar NA and Kapila Uma (2006), *Indian Agriculture in the New Millennium Changing Perspective and Development Policy*, Vol. I &II, Academic Foundation, New Delhi.
4. Vaidyanathan A (2010), *Agricultural Growth in India: The Role of Technology, Incentives and Institutions*, Oxford University Press, New Delhi.
5. A.N Agrawal (2006), *Indian Economy; Problems of Development and Planning*, 32ND Edition, New Age International (p) Ltd. New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-		
CO 2	1	3	-	1	-	-	1		
CO 3	1	2	-	3	-	-	-		
CO 4	1	3	1	2	-	-	-		
CO 5	1	2	-	3	-	-	3		

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	INDIAN FINANCIAL MARKET				
Type of Course	Elective				
Semester	VI				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites	Basic Economics Course of 200 – 299 level				
Course Summary	This course delves into the functioning and intricacies of financial markets, providing students with a comprehensive understanding of fundamental concepts, financial instruments, market structures, and services.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts of financial markets, financial instruments, and financial services.	U	C	Instructor-created exams / Quiz
CO2	Analyze theories of market efficiency, investment strategies, and risk management.	An	P	Practical Assignment
CO3	Evaluate the impact of market regulations, financial intermediaries, and technological advancements on financial markets.	E	F	Seminar Presentation / Group Discussion
CO4	Apply financial theories and concepts to analyze market trends, make investment decisions, and manage financial risks.	Ap	P	Instructor-created exams / Home Assignments
CO5	Foster critical thinking on financial market reforms, corporate governance, and ethical considerations in finance.	Ap	F	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	An Introduction to Indian Financial System		10	12
	1	Financial System- definitions- functions	1	
	2	Key elements of well-functioning financial system	2	
	3	Formal and Informal financial sectors in India - Structures	2	
	4	Components of Formal Financial Sector in India -	1	
	5	Financial Institutions-	1	
	6	Financial Markets	1	
	7	Financial Instruments - Financial services	1	
	8	Components of Informal financial sector in India	1	
II	Indian Financial System - An Overview		15	24
	9	Phase I - Pre 1951 Organisation	2	
	10	Phase II - 1951 to mid-eighties	3	
	11	Phase III - Post Nineties	2	
	12	Economic Reforms	2	
	13	Financial Sector Reforms	3	
	14	Committees and Recommendations	3	
III	Money Market in India		15	24
	15	Money Market - Definition- Functions	1	
	16	Role of Reserve Bank of India-	2	
	17	Steps to develop Money Market in India	1	
	18	Money Market Instruments - T-Bills, Commercial Papers, Commercial Bills, Certificates of Deposits-Call/Short Notice Money- Collateralised Borrowing and Lending Obligation (CBLO)	5	
	19	Tools for managing liquidity in Indian Money Market- Reserve Requirements, Interest rates, Prime Lending rate, Bank rate, Refinance from RBI, Liquidity Adjustment Facility, Repos	6	
IV	Capital Market in India		8	10
	20	Capital Market - Definition- Functions - Components - Capital Market Instruments - History of Indian Capital Market - Reforms in Indian Capital Market	3	
	21	Primary Market and Secondary Market - Instruments, Methods of raising capital, Role of Stock Exchanges - BSE and NSE, Trading Mechanism in Stock Exchanges	3	
	22	Derivative Market – Instruments	2	
V	Open ended module		12	
		Discussion: Stock Indices in India and its Calculations		
		Practical Assignments on Leading companies of India and Kerala		

		Seminar on how to participate in Online Trading in Indian Capital Market		
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Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Bharati V Pathak (2011). The Indian Financial System Markets, Institutions and Services Dorling Kindersley (India) Pvt Ltd, Licensees of Pearson Education in South Asia (Module I, II, III, and IV)

ADDITIONAL READINGS

1. Borjas, G.J. (2020). Labour Economics. McGraw-Hill.
2. Boeri, T., & Ours, J. (2008). The Economics of Imperfect Labor Markets, Princeton University Press
3. Junankar, P. (2016). Economics of Labour Market. Palgrave.
4. Sapsford, D., & Tzannatos, Z. (1993). The Economics of Labour the Market.
5. Fine, B. (1998). Labour Market Theory: A Constructive Reassessment. Routledge.
6. McConnel, C., Brue, S., & Mac, D. (2017). Contemporary Labour Economics. McGraw-Hill Education
7. State planning Board, Economic Review, Thiruvananthapuram
8. <https://mospi.gov.in/nssso-reports>
9. <https://dbie.rbi.org.in/#/dbie/home>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO 9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	3	-	2	1	-	2	-	-
CO 3	-	3	-	2	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	3	-
CO 5	-	3	-	2	-	-	1	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	DEMOGRAPHY				
Type of Course	Elective				
Semester	VI				
Academic Level	300-399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 200 – 299 level				
Course Summary	The course covers the dynamics of population growth, theoretical aspects of population, demographic data sources, empirical and policy implications of demographic issues in a developing country like India.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concepts, theories, policies and data sources of demography	U	C	Instructor-created exams / Quiz
CO2	Analyse the population dynamics with respect to fertility, mortality, nuptiality, migration and urbanisation	An	p	Instructor-created exams/ Practical Assignment /
CO3	Examine the age and sex composition of population in developed and less developed countries	E	C	Instructor-created exams/ Seminar Presentation / Observation of Practical Skills
CO4	Evaluate the effectiveness of India's current population policy in addressing the country's demographic challenges.	E	C	Instructor-created exams / Group Discussion Home Assignments/
CO5	Equip the students with practical skills needed to interpret contemporary demographic issues and to frame suitable demographic policies	C	P	Writing assignments/Group Discussion/ Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Demography		12	17
	1	Nature and scope of population studies, population studies and Demography	1	
	2	Interrelation between Population studies and other Disciplines	1	
	3	Development of population studies	2	
	4	Theories of Population - Malthusian Theory, Optimum theory of population and theory of demographic transition	4	
	5	Sources of demographic data in India- Census, Civil Registration System, National Sample Survey, Demographic Survey – National Family Health survey (Recent report in detail)	4	
II	Population Dynamics		16	23
	6	Fertility- Meaning, Fecundity and fertility, sterility, Natural fertility, Factors affecting fertility.	2	
	7	Basic measures of Fertility: crude birth rate (CBR), general fertility rate (GFR), child-woman ratio (CWR), Age specific Fertility rate (ASFR), total fertility rate (TFR), gross reproduction rate (GRR), and net reproduction rate (NRR).	2	
	8	Mortality -Meaning; Sources of mortality Data, Factors affecting mortality	2	
	9	Basic measures of mortality: Crude death rate (CDR), Age specific death rate (ASDR), infant mortality rate (IMR), crude mortality rate (CMR), maternal mortality ratio (MMR), Neonatal mortality rate (NMR), standardised death rate (SDR) and Life tables	2	
	10	Nuptiality- Meaning; Concepts- age at marriage, Synthetic and decadal synthetic cohort methods- Mean age at widowhood and divorce- Trends in age at marriage	2	
	11	Migration: General terms and concepts, types of migration, factors affecting migration	3	
	12	Urbanization: concept and measurement, Recent trends in urban population.	3	
III	Age and Sex Composition of population		10	15
	13	Age pyramids: types, concepts of stationary, stable and quasi - stationary population	2	
	14	Patterns of sex and age structure in developed and developing countries	2	
	15	Age and sex structure in India	2	
	16	Benefits and issues associated with Demographic dividend	2	
	17	Ageing of population	2	
	IV	Population policy in India		
18		History of Family planning in India	2	
19		Family Planning Programme– Organisational structure, approaches to family planning programme implementation, family planning methods and achievements	3	
20		The child survival and safe motherhood (CSSM) Programme	2	
21		Reproductive and child health programme (RCH	1	

	22	National Population Policy 2000	2	
V	Open Ended Module		12	
	1	construct and interpret life tables based upon the latest population data		
	2	Conduct a ward level population survey to identify the age and sex composition of particular locality		
	3	Student-led seminars on key global demographic trends		
	4	Debate on population growth and sustainable development.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, is only for the external examination.

REFERENCE:

1. Asha A. Bhende & Tara Kanitkar (2019). *Principles of Population Studies*. Nineteenth Edition, Himalaya Publishing house, Mumbai (Module 1 ,2, 3 &4)
2. S. N. Agarwala (1997) *India's Population Problems*. Second Edition McGraw-Hill Publishing company Ltd. New Delhi (Module 2,3&4)
3. UNCTAD *Handbook of Statistics 2023*(Module 3, Unit 14)

ADDITIONAL READINGS

1. Nancy E Riley & James McCarthy (2003) *Demography in the age of postmodern*. First Edition, Cambridge University Press, UK
2. Srinivasan, K. And A. Shariff (1998), *India: Towards Population and Demographic goals*, Oxford University Press, New Delhi
3. J N Desai M.L Jhingan, B.K Bhatt (2016), 'Demography' Vrinda Publications (P) Ltd
4. Government of India: *Census of India and Related Monographs and Reports*.
5. U.N: *Methods of Measuring Internal Migration- 1979*
6. Bose, A., (1996), *India's Basic Demographic Statistics*, B. Publishing Corporation, New Delhi

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	3	2	-	2	-	-
CO 3	-	2	-	3	-	-	2	-	-
CO 4	-	1	-	2	-	-	3	3	-
CO 5	-	3	-	2	-	-	1	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

Quiz / Assignment/ Viva Voce/ Discussion / Seminar

- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	BASIC METHODS FOR ECONOMIC RESEARCH				
Type of Course	Elective				
Semester	VI				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics course of 200 – 299 level				
Course Summary	This course seeks basic information about research and its ideas, literature, formation, analysis, interpretation, and presentation.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the historical and philosophical ideas of social research.	U	C	Instructor-created exams / Quiz
CO2	Identification of a research problem and analysis of its cause-and-effect relationship.	An	P	Practical Assignment
CO3	To apply scientific Methods in research.	Ap	F	Seminar Presentation / Group Discussion
CO4	To analyse and interpret data with appropriate tools	Ap	C	Instructor-created exams / Home Assignments
CO5	Create new research tools, concepts, and theories and apply to present world situation.	E	M	Viva
CO6				

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Fundamentals of Research		11	15
	1	Research- Meaning, Objectives, Importance, characteristics of good research	1	
	2	The relation between theory and research	1	
	3	Research methods v/s Methodology	1	

	4	Types of research– Descriptive v/s Analytical, Applied v/s Fundamental, Quantitative v/s Qualitative, Conceptual v/s Empirical	4	
	5	Scientific and Social research	1	
	6	Special features of social research	1	
	7	Different approaches in social research.	1	
	8	The importance of surveying existing literature in economic research.	1	
II	Research Design		13	20
	9	Research Formulation – Identifying, defining and formulating the research problem	2	
	10	Importance of literature review in defining a problem - Identifying research gap - Development of working hypothesis	4	
	11	Research design – Basic Principles- Need of research design — Features of good research design – Components of Research Design	3	
	12	Methods of Research Design- Exploratory, diagnostic and experimental studies- Deductive and inductive method- Static and dynamic method- Historical and dialectical method- Case study method	3	
	13	Interdisciplinary research.	1	
III	Sources and Collection of Data		9	13
	14	Execution of the research - Observation and Collection of data	1	
	15	Methods of data collection – Primary data and Secondary data	1	
	16	Primary Data - Meaning, sources, merits and demerits, collection of Data - survey method, observation method, Interview method, questionnaires, schedules	5	
	17	Secondary data – Meaning, sources, merits and demerits	1	
	18	Concepts of Universe, Population and sample.	1	
IV	Analysis of Data and Presentation		15	22
	19	Data preparation and preliminary analysis - editing, coding, data entry, exploring, displaying.	5	
	20	Examining data - frequency tables, bar charts, pie charts, histograms, use of percentages	4	
	21	Reporting and report writing	1	
	22	Components – prefatory items, introduction, methodology, findings, conclusions, appendices, bibliography, referencing and footnotes.	5	
V	Open Ended Module		12	
	1	Application of statistical tools in economic research		
	2	Develop and present a comprehensive economic research paper.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed

modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. C.R. Kothari, *Research Methodology – Methods and Techniques* (Second revised edition), New Age International Publishers 2010.

ADDITIONAL READINGS:

1. Bryman A. (2012). *Social Research Methods*, Oxford University Press
2. Bernard R. (2013). *Social Research Methods: Qualitative and Quantitative Approaches*, Sage
3. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., 2002. *An introduction to Research Methodology*, RBSA Publishers.
4. Neumann, W. L. (2007). *Basics of Social Research: Qualitative and Quantitative Approaches*. Boston, MA: Pearson Education.
5. Sinha, S.C. and Dhiman, A.K., 2002. *Research Methodology*, Ess Publications. 2 volumes.
6. Trochim, W.M.K., 2005. *Research Methods: the concise knowledge base*, Atomic Dog Publishing.
7. Wadehra, B.L. 2000. *Law relating to patents, trademarks, copyright designs and geographical indications*. Universal Law Publishing.
8. Anthony, M., Graziano, A.M. and Raulin, M.L., 2009. *Research Methods: A Process of Inquiry*, Allyn and Bacon.
9. Coley, S.M. and Scheinberg, C. A., 1990, "Proposal Writing", Sage Publications.
10. Day, R.A., 1992. *How to Write and Publish a Scientific Paper*, Cambridge University Press.
11. Fink, A., 2009. *Conducting Research Literature Reviews: From the Internet to Paper*. Sage Publications
12. Adler, E. S. And Clark, R. (2011). *An Invitation to Social Research*. Belmont, CA:
13. Cengage Learning
14. Babbie, E. (2008). *Basics of Social Research*. Belmont, CA: Thomson Learning. Ch 1-Human Inquiry and Science (pp. 3-31).

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	3	3
CO 3		2	-	2	-		-	2	3
CO 4	-	3	2	3	-	2	3	3	-
CO 5	3	-	-	-	-	2	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	ECONOMIC GEOGRAPHY				
Type of Course	Elective				
Semester	VI				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 200 – 299 level				
Course Summary	This course is designed for Economics students interested in understanding the spatial dimensions of economic activities and the impact of geographical factors on economic development. It combines economic theories with a focus on regional disparities, trade patterns, and the role of space in shaping economic outcomes.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To remember the knowledge to key social and economic issues in the context of economic globalisation	R	F	Discussion / Debates
CO2	Understand the basic concepts in Economic Geography	U	C	Instructor-created exams / Quiz
CO3	Analyse and apply key concepts and theoretical approaches in economic geography	An	P	Practical Assignment
CO4	Discuss and critically evaluate these concepts and theoretical approaches	Ap	F	Seminar Presentation / Group Discussion
CO5	Apply these concepts and theoretical approaches to key social and economic issues in the context of economic globalisation	Ap	C	Instructor-created exams / Home Assignments
CO6	Discuss policy options for overcoming inequality and uneven development in the globalising world	E	M	Viva
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks		
I	Space and Economy: Some facts		8	12		
	1	Spatial Inequalities: A Brief Historical Overview	3			
	2	The Space-Economy and the Industrial Revolution	2			
	3	Regional Disparities: When an Ancient Phenomenon Becomes Measurable	3			
II	Space in Economic Thought		21	31		
	4	Economics and Geography: A Puzzling History of Reciprocal Ignorance	3			
	5	Definition of Economic Geography	2			
	6	Nature of Economic Geography	2			
	7	Scope and importance of Economic Geography	2			
	8	Recent trends and approaches in economic geography.	2			
	9	Neo-classical-inspired	2			
	10	Location theory	2			
	11	Marxist-inspired approaches,	2			
	12	Evolutionary and institutionalist inspired approaches,	2			
	13	New economic geography	2			
	III	Economic Activity and Space			6	9
		14	Location of Economic Activity-Agricultural Location theory of Von Thunen.		2	
15		Location of Secondary Activity- Industrial Location Theory of A.Weber and E. Hoover	2			
16		Location of Tertiary Activity-Contribution of Walter Christaller and August Losch.	2			
IV	New Economic Geography (NEG)		13	18		
	17	Emergence of a new global economy -transnational integration and its spatial outcomes.	3			
	18	Core-Periphery Model (Krugman Model)	2			
	19	Baldwin-Forslid Model	2			
	20	Venables Model	2			
	21	Helpman-Krugman Model	2			
	22	Melitz Model	2			
V	Open ended module		12			
		Investigate and analyse economic disparities between two regions using various indicators				

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Coe, N.M., P.F. Kelly and H.W.C. Yeung *Economic Geography: A Contemporary Introduction*. (Oxford: Blackwell, 2007) [ISBN 9781405132190].
2. *Economic Geography: The Integration of Regions and Nations*, Authors: Pierre-Philippe Combes , Jacques-François Thies , Thierry Mayer(2008)

ADDITIONAL READINGS:

Books

1. "Geography, Trade and Competition" by Paul Krugman:
2. Introduction to concepts in Economic Geography Sections from the Dictionary of Human Geography
3. Clark, G.L., M.P. Feldman and M.S. Gertler (eds) *The Oxford Handbook of Economic Geography*. (Oxford; New York: Oxford University Press, 2003) [ISBN 9780199250837].
4. Dicken, P. *Global Shift: Mapping the Changing Contours of the World Economy*. (London: Sage, 2007) fifth edition [ISBN 9781593854362].
5. Dicken, P. and P. Lloyd *Location in Space: Theoretical Perspectives in Economic Geography*. (New York: Harper Collins Publishers, 1990) third edition [ISBN 9780060416775].
6. Ellwood, W. *The No-nonsense Guide to Globalization*. (London: Verso, 2001) [ISBN 9781904456445]. Hudson, R. *Economic Geographies: Circuits, Flows and Spaces*. (London: Sage, 2005) [ISBN 9780761948940].
7. Knox, P. and J. Agnew *The Geography of the World Economy*. (London: Arnold; New York: John Wiley and Sons, 2008) fifth edition [ISBN 9780340948354].
8. MacKinnon, D. and A. Cumbers *An Introduction to Economic Geography: Globalization, Uneven Development and Place*. (Harlow: Pearson/Prentice Hall, 2007) [ISBN 9780131293168].
9. Pike, A., A. Rodriguez-Pose and J. Tomaney *Local and Regional Development*. (London and New York: Routledge, 2006) [ISBN 9780415357180].
10. Sheppard, E. and T.J. Barnes (eds) *A Companion to Economic Geography*. (Malden, MA: Blackwell, 2002) [ISBN 9780631235798]. Stiglitz, J. *Globalization and its Discontents*. (London: Penguin, 2002) [ISBN 9780393324396]

Journals

1. Amin, A. and N. Thrift 'Neo-Marshallian Nodes in Global Networks', *International Journal of Urban and Regional Research* (16) 1992, pp.571–87.
2. Asheim, B. 'Industrial Districts as "Learning Regions": a condition for prosperity', *European Planning Studies* 4(4) 1996, pp.379–400.
3. Beaverstock, J.V., R.G. Smith and P.J. Taylor 'World City Network: A New Metageography?', *Annals of the Association of American Geographers* 90(1) 2000, pp.123–34.
4. Clark, G. 'Money Flows Like Mercury: The Geography of Global Finance', *Geografiska Annaler Vol. 87B* (2) 2005, pp.99–112.
5. Coe, N.M., M. Hess, H.W.C. Yeung, P. Dicken and J. Henderson "'Globalizing" Regional Development: A Global Production Networks Perspective', *Transactions of the Institute of British Geographers* 29(4) 2004, pp.468–84.

6. Graham, S. 'Global Grids of Glass: On Global Cities, Telecommunications and Planetary Urban Networks', *Urban Studies* 36 (5/6) 1999, pp.929–49.
7. Henderson, J., P. Dicken, M. Hess, N. Coe and H.W.C. Yeung 'Global Production Networks and the Analysis of Economic Development', *Review of International Political Economy* 9(3) 2002, pp.436–64. Hudson, R. 'The Learning Economy, the Learning Firm and the Learning Region: A Sympathetic Critique of the Limits to Learning', *European Urban and Regional Studies* 6(1) 1999, pp.59–72.
8. James, A. 'Demystifying the Role of Culture in Innovative Regional Economies', *Regional Studies* 39(9) 2005, pp.1197–216.
9. MacKinnon, D., A. Cumbers and K. Chapman 'Learning, Innovation and Regional Development: A Critical Appraisal of Recent Debates', *Progress in Human Geography* 26(3) 2002, pp.293–311. Morgan, K. 'The Learning Region: Institutions, Innovation and Regional Renewal', *Regional Studies* 31(5) 1997, pp.491–503.
10. Smith, A., A. Rainnie, M. Dunford, J. Hardy, R. Hudson and D. Sadler 'Networks of Value, Commodities and Regions: Reworking Divisions of Labour in Macro-regional Economies', *Progress in Human Geography* 26(1) 2002, pp.41–63

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	3	3
CO 3		2	-	2	-		-	2	3
CO 4	-	3	2	3	-	2	3	3	-
CO 5	3	-	-	-	-	2	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	SOCIAL CHOICE THEORY				
Type of Course	Elective				
Semester	VIII				
Academic Level	400 – 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Course on Microeconomics and Macroeconomics of level 300 – 399				
Course Summary	This course is intended to introduce various topics in social choice theory, which is a formal analysis of general preference aggregation and voting rules.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the historical background and development of social choice theory.	U	F	Discussion / Debates
CO2	To discuss and develop the concepts in social choice theory.	Ap	C	Instructor-created exams / Quiz
CO3	Demonstrate how individual choices in a society can be aggregated and translated into a collective choice	An	P	Practical Assignment
CO4	Discuss and critically evaluate the theories in social choice.	Ap	F	Seminar Presentation / Group Discussion
CO5	Examine how collective decision-making processes influence the well-being of society.	Ap	C	Instructor-created exams / Home Assignments
CO6	Empirical analysis of social choice theory in political decision-making processes.	E	M	Project
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Elements of Social Choice Theory		9	13
	1	Historical Background and development of social choice theory.	3	
	2	A special case with two alternatives- Simple Majority.	2	
	3	May's Theorem	2	
	4	Condorcet winner criterion	2	
II	General Difficulties of Preference Aggregation		20	29
	5	Binary relations	2	
	6	Preference Aggregation rule	2	
	6	Arrow's Theorem	2	
	7	Possibilities of preference aggregation	2	
	8	The liberal paradox	2	
	9	The Gibbard-Satterthwaite theorem	2	
	10	The aggregation of welfare measures or qualitative ratings	2	
	11	Sen's extension of Arrow's framework	2	
	12	The aggregation of judgments	2	
	13	The paradoxes of judgment aggregation	2	
III	Voting Rules		10	15
	14	Majoritarian methods- Sequential majority	2	
	15	Copeland voting rule	2	
	16	Positional Methods- Plurality	2	
	17	Approval Voting	2	
	18	Borda Score Voting rule	2	
IV	LIBERAL PARADOX		9	13
	19	Sen's Liberal Paradox	3	
	20	Gibbard's modification	2	
	21	Escape routes	2	
	22	Game Forms and Liberal Paradox.	2	
V	Open ended module		12	
	1	Social choice in political contexts: Parliamentary systems		
	2	Economic implications of voting rules in legislatures Empirical analysis of political decision-making processes		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Handbook of Social Choice and Welfare edited by Kenneth Joseph Arrow, Amartya Sen, Kōtarō Suzumura
2. A.K.Sen (2017), *Collective Choice and Social Welfare*, Expanded Edition, Penguin.
3. A.K. Sen (1983), *Choice, Welfare and Measurement*, OUP.
4. A.K. Sen (1986), *Social Choice Theory* in Arrow and Intrilligator (ed) Handbook of Mathematical Economics, Vol III, North Holland.

ADDITIONAL READINGS:

1. Kenneth J. Arrow (1963), *Social Choice and Individual Values*, 2nd ed., Wiley.
2. K. Suzumura (1983), *Rational Choice, Collective Decisions and social Welfare*, Cambridge University Press.
3. Wriglesworth (1985), *Libertarian Conflicts in Social Choice*, Cambridge University Press.
4. M. Richter (1966), Revealed Preference Theory,
 - a. *Econometrica*.
5. M. Richter (1967), Rational Choice in Chipman et al. (ed)
 - a. *Preference, Utility and Demand*.
6. Prasanta K. Pattanaik (1994), Some non-welfaristic issues in Welfare Economics in Dutta (ed) *Welfare Economics*, OUP.
7. Gaertner, Pattanaik and Suzumura (1992), Individual Rights Revisited, *Economica*.
8. A. Gibbard (1974), A Pareto Consistent Libertarian Claim,
 - a. *Journal of Economic Theory*.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	3	3
CO 3		2	-	2	-		-	2	3
CO 4	-	3	2	3	-	2	3	3	-
CO 5	3	-	-	-	-	2	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	BANKING AND INSURANCE				
Type of Course	Elective				
Semester	VIII				
Academic Level	400 – 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 200 – 299 level				
Course Summary	Students understand the banking and insurance practices. And at the end of the Course student will be able to evaluate banking procedure and also take up job in banks and insurance sector.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept of banking and insurance	U	C	Instructor-created exams / Quiz
CO2	Analyze various banking services and insurance policies	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Evaluate different insurance and banking services	U	P	Seminar Presentation / Group Discussion
CO4	Apply the knowledge in day-to-day banking practices	Ap	C	Instructor-created exams / Home Assignments
CO5	Understand the practical knowledge in banking services	U	F	Writing assignments
CO6	Prepare students to take up jobs in banking and insurance sector	Ap	P	Visiting websites to understand and prepare for the examinations for IPBS and IRDA's insurance agent
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Types of Banks		14	20
	1	Banks- meaning and economic importance	2	
	2	types of banks- Central Bank- Commercial banks- Development bank Cooperative banks- Structure and functioning	2	
	3	Development financial institutions (IFCI, IDBI, IIBI, SIDBI) - Specialized financial institutions (EXIM Bank-National Housing Bank NABARD-MUDRA bank)	3	
	4	Specialized investment institutions (Pension funds- Hedge funds- Mutual funds -UTI)-	2	
	5	Non Banking Financial Companies-Investment banks-Merchant banks.	5	
II	Banking Services		10	15
	6	Types of accounts, KYC and Bank account, Loans, Money Transfer, Credit and debit cards, Lockers.	3	
	7	Innovations in Banking Transactions-Mail transfer-Telegraphic transfer-MICR clearing- Automated clearing system-Electronic funds transfer-	2	
	8	Digital payment system- E-banking-Virtual payments systems	1	
	9	Internet banking- Mobile banking and mobile application, Home banking-Tele-banking-Core banking.	1	
	10	Why is Customer Service Important, key areas of customer's services, Customer service strategies in banking sector	2	
	11	Customer feedback and complaints	1	
	III	Banking Sector Reforms in India		
12		Banking sector reforms since 1991- Context, need and objectives- Implementations of the Narsimham Committee recommendations-	2	
13		Issues in banking sector reforms-	1	
14		Priority sector lending-Asset classification	2	
15		Non-performing assets-Capital adequacy norms-	2	
16		Regulation of the banking sector-Board for Financial Supervision-Credit Information Bureau of India Limited (CIBIL)-Banking	2	
17		Ombudsman-SARFAESI Act.	1	
IV	Insurance		14	20
	18	Introduction to insurance: Purpose and need of insurance: Insurance as a social security tool	2	
	19	Insurance and economic development	2	
	20	Fundamental Principles of Insurance, Reinsurance	2	
	21	Types of Insurance: Life Insurance, General Insurance: Marine, Fire, Medical, Health etc.	5	
	22	Actuarial science meaning, Regulatory agencies of insurance in India	3	
V	Open ended module		12	
		Learn about the legal framework within which banks and insurance companies operate.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Sukhvinder Mishra, Banking law and practices, Sulthan chand publishing, New Delhi
2. Gordon and Natarajan, Banking- theory, law and practices, Himalaya Publishing house, New Delhi
3. M.N Mishra and S.B Mishra, Insurance- Principles and practices, Sulthan chand publishing, New Delhi

ADDITIONAL READINGS

1. MH de Kock: Central Banking- Universal Book Stall, New Delhi.
2. Meir Kohn(1996):Financial InstitutionsandMarkets-TataMcGrawHill.
3. Roger LeRoy Miller and DavidVanHoose (1993): Modern Money and Banking-McGraw- Hill International.
4. Mishra M.N: Insurance Principles and practice; S. Chand and co, New Delhi.
5. Insurance principles and practice - Moorthy.A , Margham publications, Chennai
6. Jawed Akhtar and Shabbir Alam: Banking System in India: Reforms and Performance Evaluation- New Century Publications, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2
CO 3	3	-	-	1	-	-	-
CO 4	-	3	1	2	-	-	3
CO 5	3	-	-	-	-	-	2
CO 6	-	2	2	3	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ECONOMICS OF EDUCATION				
Type of Course	Major				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Courses of 200 – 299 level				
Course Summary	This course provides an overview of economics of education to lay out the evidence as clearly as possible, note agreements, disagreements, and unresolved points in literature, and to help students develop the tools necessary to draw their own conclusions.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To explore the interrelationship between economics and education in the modern society	U	F	Instructor-created exams / Quiz
CO2	To examine the demand, supply, costs and benefits of education within the purview of economic development	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	To understand the economic imperative of manpower planning and human resource development for a country	U	P	Seminar Presentation / Group Discussion
CO4	To get an overview of the education scenario of both India and Kerala	Ap	P	Instructor-created exams / Home Assignments
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Education, Economics and the Modern Society		10	14
	1	Education in the modern world	2	
	2	Socio-economic significance of education	2	
	3	Economists' perception of education	2	
	4	Education as a public/merit good	2	
	5	Economics of education: The subject matter, framework and significance	2	
II	Education and Economic Development		12	18
	6	Education as the prime mover of modern society	2	
	7	Education and economic growth	2	
	8	Indicators of economic and educational development	2	
	9	Stages of economic and educational development	2	
	10	Demand for education and its major determinants	2	
	11	Supply of Education and its major determinants	2	
III	Cost and Benefits of Education		12	18
	12	Education as an investment – Private return and social return	2	
	13	Costs and benefits of education – Direct and indirect social benefits – Cost-benefit analysis of education	4	
	14	Rate of return analysis	2	
	15	Input-output analysis	2	
	16	Wastage and stagnation in education	1	
	17	Educational budgets	1	
IV	Human Capital and Manpower Planning		14	20
	18	Economic imperative of human capital	2	
	19	Human resource development – Process of human resource development – Indicators of human resource development –	5	
	20	Linking education with the economy	2	
	21	Educational planning	2	
	22	Manpower planning – Features and techniques of manpower planning and forecasting	3	
V	Open Ended Module		12	
		Discussion based on the primary, secondary, higher secondary and higher education scenario of India and Kerala		
		Practical Assignments on Initiatives for educational development		
		Seminar on the new education policy and its impacts on the national and regional economy		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, is only for the external examination.

REFERENCE:

1. Chattopadhyay, S. (2012). *Education and Economics: Disciplinary Evolution and Policy Discourse*. OUP India. (All modules)

ADDITIONAL READINGS

1. Lovenheim, M., & Turner, S. E. (2019). *Economics of education*. Worth.
2. Brewer, D. J., & McEwan, P. J. (2010). *Economics of education*. Elsevier.
3. Rao, D. P. (2010). *Economics of Education and human development in India: Essays in Honour of Prof. K.S. Chalam*.
4. Akinyemi, S. (2013). *The economics of education*. Strategic Book Publishing.
5. Bhat, F. A., & Gull, K. (2018). *An Introductory Economics of Education*.
6. Lok, J. (2022). *Education How brings economic growth*.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	1	-	-	-	-	-	3	-	-
CO 2	-	1	-	-	-	-	2	3	-
CO 3	2	-	-	-	-	-	3	1	-
CO 4	-	-	-	1	2	-	-	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓

Programme	B.A. Economics				
Course Title	LAW AND ECONOMICS				
Type of Course	Elective				
Semester	VIII				
Academic Level	400 – 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Microeconomics course of 200 – 299 level				
Course Summary	This course provides an introductory exposure to law, legal theory and the way legal system functions and how legal process impact on the efficiency of economic activities/transactions				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand how the legal aspect influences the economic behaviour and understand major legal traditions, especially in India.	U	C	Instructor-created exams / Quiz
CO2	Conduct economic analysis of law related to the regulation and enforcement of property rights and contracts.	Ap	P	Practical Assignment /Case Studies in Indian context
CO3	Evaluate relative merits and demerits of various economic analyses of law in property rights and contract law.	U	P	Seminar Presentation / Group Discussion
CO4	Apply economics in the theory of property rights and contract law.	Ap	C	Instructor-created exams / Home Assignments/Cases in the Indian context
CO5	Create alternative cases in property rights and contract law in the Indian context, with the insights gained from the course, which provide better policy insights.	U	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in law in the contemporary world.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

Module	Unit	COURSE CONTENT	Hours	Marks
I	An Introduction to Law and Economics		12	18
	1	Economic analysis of law	1	
	2	Why should Economists study law?	2	
	3	How to analyze legal and economic issues.	2	
	4	The Primacy of efficiency over distribution in analyzing private law	2	
	5	Efficiency criteria – Pareto, Kaldor-Hicks	2	
	6	Nash Equilibrium, Fairness Criteria.	2	
	7	Markets and efficiency and Market failure	1	
II	An Introduction to Law and Legal Institutions		6	10
	8	The Civil law and the common law traditions.	1	
	9	The institutions of Judicial systems in India –	1	
	10	Legal Principles, and the functioning of Legal system	2	
	11	Economic Theory of Legal Process - Sue - Trial –Appeals – Judiciary - Lawyers’ Profession.	2	
III	Theory of Property Right		15	21
	12	The Nature and Function of Property Rights -	1	
	13	The origin of institution of property - The Legal Concept of Property.	2	
	14	Enforcement of property rights - Bargaining Theory - An Economic Theory of Property –	4	
	15	Property Rights and Coase Theorem	2	
	16	The Public Use of Private Property	2	
	17	Eminent domain and Regulation of Property – Applications.	2	
	18	An Introduction to Intellectual Property Rights (IPRs).	2	
IV	The Economics of Contract Law		15	21
	19	An Introduction to Contracts	1	
	20	Complete and Incomplete Contracts - The Elements of Valid and Invalid Contracts.	3	
	21	Bargaining theory- Economic Theory of Contract.	6	
	22	Contracts and Efficient Exchange - Legal Remedies as Incentives: Applications.	5	
V	Open Ended Module		12	
	Various Case Studies in Economics Property Rights – Various Case Studies in Economics of Contract			

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE

1. Cooter, R. and T. Ulen. (2004). Law and Economics, Boston: Pearson Addison Wesley Supplementary Readings.
2. Posner, Richard A. (1998). Economic Analysis of Law. (5th edition) Little Brown, Boston.
3. Seervai H M (1991) Constitutional Law of India, Vol. 1-3 NM Tripathi.

ADDITIONAL READINGS

1. Melvin Aron Eisenberg, The Nature of the Common Law (1989). Harvard University Press, Cambridge.
2. BarzelYoran, The Economics of Property Rights (1988). Cambridge University Press.
3. Steven Shavell (2004) “Foundations of Economic Analysis of Law, Harvard University Press: Cambridge MA.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2	-	-
CO 3	3	-	-	1	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	-	-
CO 5	3	-	-	-	-	-	2	-	-
CO 6	-	2	2	3	3	-	3	-	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	LOCAL LEVEL PLANNING				
Type of Course	Elective				
Semester	VIII				
Academic Level	400 - 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics course of level 200 – 299				
Course Summary	This course explores the importance of Panchayati Raj Institutions, the process of decentralization and the concept of project appraisal as well as the components and theories of local economic development.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand various local government institutions	U	C	Instructor-created exams / Quiz
CO2	Analyse the role of decentralization process	An	P	Practical Assignment
CO3	Evaluate various local development models	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the theoretical knowledge to current project appraisal of various kinds	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the local level planning	U	F	Viva
CO6				
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Panchayati Raj Institutions		12	17
	1	Panchayati Raj Institutions- Evolution of Panchayati Raj Institutions in India	2	
	2	Aims and Objectives of Panchayati Raj Institutions – Functions	3	
	3	Recommendation of various Committee - Balwant Rai Mehta committee- Ashok Mehta Committee – G V K Rao Committee – L M Singhvi Committee	3	
	4	Features of Panchayati Raj Institutions	2	
	5	The 73 rd and 74 th Constitutional Amendments	2	
II	The process of Decentralization		9	14
	6	Decentralized Planning in Kerala	2	
	7	How Kerala is Different	1	
	8	History – Evolution – importance of People’s plan movement	3	
	9	The role of Kudumbashree	3	
III	The concept of Project Appraisal		12	17
	10	The role of Local Government Agencies (LGAs) in Project Appraisal Framework	2	
	11	Introduction to Project Evaluation	1	
	12	Methods of Project Evaluation – Return on Investment (ROI) – Cost - Benefit analysis (CBA) – Net Present Value (NPV) – Internal Rate of Return (IRR) – The Payback Period – Risk Adjusted Discount Rate (RADR)	5	
	13	Steps to conduct a project evaluation	2	
	14	challenges in Project monitoring and evaluation	2	
IV	The Local and regional Development		15	22
	15	Introduction: Local and Regional Development	1	
	16	what kind of local and regional development and for whom?	2	
	17	Concepts and theories of local and regional development	2	
	18	Traditional model	2	
	19	Pure agglomeration Model	2	
	20	Local community model	2	
	21	Territorial innovation model	2	
	22	Sustainable Development Model	2	
V	Open ended module		12	
		Discussion based on different methods of prevailing project evaluation		
		Practical Assignments to visit the local level institutions to conduct the project evaluation		
		Seminar on the presenting the relevance of best project evaluation methods		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, is only for the external examination.

REFERENCE:

1. Isaac, T. T., & Franke, R. W. (2002). *Local democracy and development: The Kerala people's campaign for decentralized planning*. Rowman & Littlefield. **(Module 1 and Module 2)**
2. Goel, S. L., & Shalini, R. (2003). *Panchayati Raj in India: theory and practice*. Deep and Deep Publications Pvt. Ltd. **(Module 2)**
3. Harberger, A. C., & Harberger, A. C. (1972). *Techniques of project appraisal* (pp. 1-21). Palgrave Macmillan UK. **(Module 3)**
4. Pike, A., Rodríguez-Pose, A., & Tomaney, J. (2016). *Local and regional development*. Routledge. **(Module 4)**
5. Kačar, B., Curić, J., & Ikić, S. (2016). Local economic development in theories of regional economies and rural studies. *Економика пољопривреде*, 63(1), 231-246 **(Module 4)**

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	2	-	2	-	-
CO 3	3	-	-	1	-	-	-	-	-
CO 4	-	3	-	-	3	-	3	1	2
CO 5	3	-	1	-	-	-	2	-	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	FINANCE AND TECHNOLOGY				
Type of Course	Elective				
Semester	VIII				
Academic Level	400 – 499				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Financial Economics course of 200 – 299 level				
Course Summary	This course introduces fundamental building blocks of financial technologies and real-world applications.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To familiarize the students with the Finance and technological sector	U	C	Instructor-created exams / Quiz
CO2	It outlines how new technologies are transforming the financial services industry.	An	P	Practical Assignment
CO3	Examine the fundamental differences between the traditional and modern financial sectors, focusing on the impact of innovation and technology on business models, products, applications, and customer interfaces.	Ap	F	Seminar Presentation / Group Discussion
CO4	To explore how AI, machine learning, deep learning, blockchain, and open APIs are applied within the financial technology industry.	Ap	C	Instructor-created exams / Home Assignments
CO5	To design and implement case study-oriented learning experiences for students, focusing on various sectors of financial technology.	E	M	Viva
CO6				

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)

- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		11	15
	1	Finance and technology	1	
	2	Finance sector	2	
	3	Innovation in Finance	1	
	4	Disruption in Finance	4	
	5	Introduction to the Finance and technology's landscape	2	
	6	Application of Finance and technology	1	
II	FinTech Architecture and FinTech Technologies		11	15
	7	Overview of FinTech architecture.	2	
	8	Importance of Finance and Technological architecture	2	
	9	Features of Finance and Technological architecture	2	
	10	Introduction to Block chain integration in FinTech	2	
	11	Merits and Demerits of Block chain in Fin Tech	1	
	12	Introduction to Open Application Programming Interfaces (APIs).	1	
	13	Exploring the applications of AI and ML in finance	1	
III	India's Fintech Sector		11	15
	14	Overview of various fintech sectors in India	1	
	15	The regulatory framework for fintech in India	1	
	16	Regulatory compliance issues in the Indian fintech space	5	
	17	Trends in FinTech and the Fintech landscape in India	2	
	18	Examining key players, institutions, innovations, and challenges.	2	
IV	India's Fintech Sector - Case studies		15	25
	19	Real Time Payments and Neo Banking	5	
	20	Wealth technology and Insurance technology	4	
	21	Lending and Blockchain	1	
	22	The impact of Fintech on the Financial Inclusion and broader economy	5	
V	Open Ended Module		12	
	1	To take up case studies with respect to the various sectors of Fintech in India		
	2	Describe the role of different technologies in the fintech sector.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Phadke, Sanjay. 2023. Fintech Future: The Digital DNA of Finance Paperback – 23 September.

2. Atlantic Singh, Jaspal. 2022. Financial Technology (FinTech) and Digital Banking in India Hardcover – 1 November.
3. Chishti, S., & Barberis, J. (2016). The Fintech book: The financial technology handbook for investors, entrepreneurs and visionaries. John Wiley & Sons.
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17. Rajeswari, P., & Vijai, C. (2021). Fintech industry in India: the revolutionized finance sector. Eur. J. Mol. Clin. Med, 8(11), 4300-4306.
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ADDITIONAL READINGS:

1. Inc42. 2023. State of Indian Fintech Report 2023. Available at <https://inc42.com/reports/state-of-indian-fintech-report-q1-2023/>
2. Mordor Intelligence. India Fintech report. Available at <https://www.mordorintelligence.com/industry-reports/india-fintech-market>
3. https://www.ey.com/en_in/financial-services/how-is-the-fintech-sector-in-india-poised-forexponential-growth
4. <https://www.pwc.in/industries/financial-services/fintech.html>
5. <https://rbsa.in/wp-content/uploads/reports/research-reports/RBSA-Advisors-PresentsFinTech-Industry-in-India-February2021.pdf>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	3	3
CO 3		2	-	2	-		-	2	3
CO 4	-	3	2	3	-	2	3	3	-
CO 5	3	-	-	-	-	2	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Minor Courses in Economics

Programme	B.A. Economics				
Course Title	FISCAL TOOLS FOR POLICY FORMULATION				
Type of Course	Minor				
Semester	I				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores important Concepts and Instruments of Fiscal policy.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the Concept of Fiscal Policy	U	C	Instructor-created exams / Quiz
CO2	Identify Different tools of Fiscal policy	R	F	Created exams / Quiz
CO3	Develop comprehensive analysis of Public Expenditure and its Various theories.	An	P	Seminar Presentation / Group Discussion
CO4	Identify different Sources of Public revenue	R	F	Instructor-created exams / Home Assignments
CO5	Compare Public debt and Private dept	E	M	Writing assignments
CO6	Classify different types of Public dept and budget	U	C	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M) ,				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Fiscal Policy and Instruments of Fiscal Policy		9	13
	1	Meaning of Fiscal Policy- Traditional View, Modern view and Keynes' view on Fiscal Policy	1	
	2	Objectives of Fiscal policy in developing economies	2	
	3	Major fiscal functions	4	
	4	Instruments of Fiscal Policy	2	
II	Public Expenditure		7	11
	5	Meaning and types of Public Expenditure	2	
	6	Role of Public Expenditure	1	
	7	Canons Of Public Expenditure	2	
	8	Adolph Wagner Hypothesis, Peacock wiseman Hypothesis	2	
III	Public Revenue		16	23
	9	Meaning and Sources of Public Revenue.	4	
	10	Concept of Proportional, Progressive, Regressive Taxation	2	
	11	Principles of Taxation	2	
	12	requirements of a Good Tax System	2	
	13	Taxable Capacity	4	
	14	Impact, incidence and Shifting of Taxation (Concepts only)	2	
IV	Public Debt & Budget		16	23
	15	Meaning and Objectives of Public Dept	2	
	16	Importance of Public Debt	1	
	17	Difference between Public Debt and Private Dept	1	
	18	Classification of Public Debt	3	
	19	Burden of Public Debt	2	
	20	Concept and Purpose of Budget	2	
	21	Classification of Budget	2	
22	Performance and Programme Budgeting System (PPBS), Zero Based Budgeting	3		
V	Open ended module		12	
		Recent trends in Kerala's expenditure and Public debt		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. R.K LEKHI(2011)Public Finance,18th Edition(Module 1-4, Except unit3 in the Module 1)
2. Dr.S.K SINGH {2014)Public Finance in Theory and Practice Ninth Edition. (3rd unit in Module 1)

ADDITIONAL READINGS

1. Dr. S.K SINGH (2014) Public Finance in Theory and Practice Ninth Edition.
2. RICHARD.A. MUSGRAVE and PEGGY B MUSGRAVE (2004) Public Finance in Theory and Practice, Fifth Edition
3. H.L Bhatia (2012) Public Finance,27th Edition.
4. B.P Tyagi, Public Finance (2014)
5. T.N. Hajela, Public Finance 3rd Edition.
6. John Cullis&Philip Jones, Public Finance Public Choice, Analytical Perspectives,3rd Edition.
7. Ambar Ghosh &Chandra Ghosh, Public Finance,3rd Edition.
8. Rabindra Kr. Choudhury &Reema Choudhury Chakraborty, Public Finance and Fiscal Policy

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	-	-	1	-	-	-	-	3
CO 3	3	-	-	-	-	-	2	3	1
CO 4	3	1	-	-	-	-	1	1	2
CO 5	1	-	-	-	-	-	3	2	-
CO 6	3	3	-	1	1	-	2	3	1

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5	✓	✓		✓
CO 6	✓	✓		✓

Programme	B.A. Economics				
Course Title	FISCAL POLICY AND STABILISATION				
Type of Course	Minor				
Semester	II				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores basic approaches, determinants of Fiscal policy and their role for Economic Growth and Stability.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand different approaches of fiscal Policy	U	C	Instructor-created exams / Quiz
CO2	Analyze the role of fiscal policy for full employment	An	P	Created Exams/ Quiz
CO3	Identify the various determinants of fiscal policy for maintaining Economic Growth and stability	R	F	Created Exams, Seminar Presentation / Group Discussion
CO4	Analyse the role of Multiplier in determination of Fiscal Policy.	An	p	Instructor-created exams / Home Assignments
CO5	Identify the Key issues in fiscal federalism	U	F	Created Exams, Group discussion.
CO6	Explain the role and functions of finance Commission.	An	M	Created exams, Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M),

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Approaches of Fiscal Policy		11	15
	1	Built In-Stabilisers or Automatic Stabiliser	3	
	2	Compensatory Fiscal Policy	4	
	3	Functional Finance Approach	2	
	4	Anti-Inflationary Fiscal policy	2	
II	Fiscal Policy for Full Employment		10	14
	5	Role of Fiscal Policy for attaining full employment.	3	
	6	Deficit Spending	2	
	7	Deficit without Spending	2	
	8	Balanced Budget Multiplier (Spending without Deficit).	3	

III	Fiscal policy For Economic Growth		8	12
	9	Interdependence between Fiscal policy and Economic Growth	3	
	10	Promotion of Investment	1	
	11	Promotion of saving	1	
	12	Role of Multiplier in Determination of Fiscal Policy	3	
IV	Fiscal Federalism		19	29
	13	Concept of Federalism,	1	
	14	Key issues in Fiscal federalism	2	
	15	Advantages and Disadvantages of a Federal Form of Government	3	
	16	Economic aspects of Fiscal Federalism	2	
	17	Allocation of Revenue Resources between Centre and States Under the Constitution(Financial relations)	2	
	18	Vertical and Horizontal Fiscal imbalances	1	
	19	Concept and Role of Finance Commission .,	1	
	20	Powers and Functions of Finance commission	3	
	21	Major recommendations of Finance Commissions	3	
	22	Latest finance Commission	1	
V	Open ended module		12	
		Seminar Presentation of limitations of fiscal policy in UDCs		
		Assignments based on seminar Presentation		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. R.K LEKHI(2011)Public Finance,18th Edition(Module1,2,3)
2. Dr.S.K SINGH {2014)Public Finance in Theory and Practice Ninth Edition (Module 4)

ADDITIONAL READINGS

1. Dr.S.K SINGH {2014)Public Finance in Theory and Practice Ninth Edition.
2. RICHARD.A. MUSGRAVE and PEGGY B MUSGRAVE (2004) Public Finance in Theory and Practice, Fifth Edition
3. H.L Bhatia (2012) Public Finance,27 th Edition
4. B.P Tyagi, Public Finance (2014)
5. T.N. Hajela, Public Finance 3rd Edition.
6. John Cullis&Philip Jones, Public Finance Public Choice, Analytical Perspectives,3rd Edition.
7. Ambar Ghosh &Chandra Ghosh, Public Finance,3rd Edition.
8. Rabindra Kr. Choudhury &Reema Choudhury Chakraborty, Public Finance and Fiscal Policy

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	2	-
CO 2	-	3	-	1	-	-	2	2	1
CO 3	3	-	-	-	-	-	-	3	1
CO 4	-	3	-	1	-	-	3	2	-
CO 5	3	3	-	1	-	-	-	3	2
CO 6	3	2	-	-	-	-	-	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5	✓	✓		✓
CO 6	✓	✓		✓

Programme	B.A. Economics				
Course Title	TAX POLICY IN INDIA				
Type of Course	Minor				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics course of 100 - 199				
Course Summary	This course provides an overview of taxation system in India and utilization of taxation for policy purposes				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic nature of the Indian tax system	U	C	Instructor-created exams / Quiz
CO2	Analyze the different tax strategies in the Indian Economy	An	P	Practical Assignment
CO3	Evaluate the efficiency of the Indian tax structure	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply the knowledge for tax computation	Ap	C	Instructor-created exams / Home Assignments
CO5	Create basic skills for an amateur tax practitioner	C	P	Viva

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)
Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		10	15
	1	History of Tax System in India	2	
	2	Objectives of Indian Tax System	2	
	3	Direct Taxes & Indirect Taxes	3	
	4	Union Taxes and State Taxes, Local Taxes	3	
II	Direct Taxes in India		12	20
	5	Income Tax Act 1961	2	
	6	Computation Of Income Tax in India-	2	
	7	Recent Changes in Income Tax Calculation in India	2	
	8	Corporate Tax	3	
	9	Capital Gain Tax	3	

III	Indirect Taxes In India		12	20
	10	Excise Duty	3	
	11	Service Tax	2	
	12	Sales Tax	2	
	13	Customs Duty	3	
	14	Value Added Tax	1	
	15	Issues Of Indirect Taxation System In India	1	
IV	Goods And Service Tax in India		14	15
	16	GST – Definition and Concepts	2	
	17	Supply-Composite and Mixed	2	
	18	Concept Of Interstate and Intrastate	2	
	19	Exemptions From GST	3	
	20	Advantages And Disadvantages of GST	2	
	21	GST Calculation - Basics	2	
	22	Fiscal Federalism and GST	1	
V	Open Ended Module		12	
		Computation of Taxes- Income Tax, GST....		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. M Govinda Rao: Changing Countours Of Federal Fiscal Arrangements In India, Amaresh Bagchi (Ed) Readings In Public Finance: Oxford University Press 2005
2. Mahesh Purohit: Value Added Tax: Experiences In India And Other Countries: 2

ADDITIONAL READINGS

1. Goods And Service Tax In Indai: C A Pritham Mahire, Sulthan Chand Publications 2017
2. Singhania, Vinod K And Monica Singhania: Students Guide To Income Tax: University Edition, Taxman Publications Private Limited New Delhi

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	2	-	-
CO 2	-	-	-	2	-	-	2
CO 3	-	-	-	2	-	-	2
CO 4	-	2	-	-	-	-	3
CO 5	-	-	2	-	-	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	MONETARY TOOLS FOR POLICY FORMULATION				
Type of Course	Minor				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores the concept of monetary policy, the role of monetary authorities, and to evaluate various tools of monetary policy and its formulation.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept of monetary policy	U	C	Instructor-created exams / Quiz
CO2	Analyse the role of monetary authorities to stabilise the economy	Ap	P	Practical Assignment / Observation of Practical Skills
CO3	Evaluate various tools of monetary policy instruments	U	P	Seminar Presentation / Group Discussion
CO4	Apply the formulation of monetary policy.	Ap	C	Instructor-created exams / Home Assignments
CO5	Create complete understanding of the current scenario within the framework of Monetary policy formulation	U	F	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		14	20
	1	Introduction to Monetary Policy – Meaning and definition of Monetary Policy	2	
	2	Objectives of Monetary Policy	2	
	3	The transmission Mechanism- How Monetary policy influences Aggregate Demand	3	
	4	Theory of liquidity preference	2	
	5	The downward slope of the Aggregate Demand Curve –	2	
	6	Changes in the money supply	2	
	7	Changes in the interest rate	1	
II	Economic Stabilisation – Monetary Policy		15	22
	8	Tools of Monetary Policy	1	
	9	open market operation	1	
	10	changing the bank rate	1	
	11	changing the cash reserve ratio	1	
	12	selective credit controls	2	
	13	Expansionary monetary policy to cure recession or depression	2	
	14	How expansionary Monetary Policy works: Keynesian view	3	
	15	Tight monetary policy to control inflation	2	
	16	How the Tight Monetary Policy works: Keynesian view	2	
III	Monetary Policy – Monetarist View		8	12
	17	Sources of Monetary Mismanagement – variable time lags, interest rate as a wrong target variable	4	
	18	Monetary Rule:	2	
	19	Monetary Policy Prescription	2	
IV	Pre-requisites for Effective Monetary Transmission		11	16
	20	Challenges of Effective Monetary Policy in Emerging Economies	5	
	21	Monetary Transmission in Developing Countries:	4	
	22	Evidence from India	2	
V	Open ended module		12	
		Discussion based on different economic stabilisation policies across countries		
		Seminar on presenting the comparative analysis of monetary policy regimes of various countries		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Mankiw, N. G. (2007). *Principles of Macro Economics*, 4TH EDITION, Cengage Learning. (Module 1)

2. Ahuja, H. L. (2022). *Principles of Macroeconomics*. S. Chand Publishing.(Module 2 and Module 3)
3. Ghate, C., & Kletzer, K. M. (Eds.). (2016). *Monetary policy in India: A modern macroeconomic perspective*. Springer. (Module 4)

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	-	-	1	-	-	2
CO 3	-	-	-	3	-	3	2
CO 4	-	-	2	3	-	2	3
CO 5	-	-	-	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	MONETARY POLICY AND STABILISATION				
Type of Course	Minor				
Semester	II				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Macroeconomics course of 0 – 99 level				
Course Summary	This course provides an in-depth analysis of monetary policy and its role in stabilization within the framework of macroeconomic theory. It examines the tools, objectives, and implementation of monetary policy, and its effectiveness in achieving macroeconomic stability. The course also explores the relationship between monetary policy and other macroeconomic variables such as inflation, output, employment, and economic growth.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept and objectives of monetary policy	U	C	Instructor-created exams / Quiz
CO2	Analyze the tools and mechanisms of monetary policy implementation	An	F	Practical Assignment
CO3	Evaluate the effectiveness of monetary policy in stabilizing the economy.	Ap	F	Seminar Presentation / Group Discussion
CO4	Apply theoretical concepts to real-world monetary policy issues and challenges	Ap	P	Seminar Presentation / Group Discussion
CO5	Critically assess the role of central banks in formulating and implementing monetary policy	An	F	Viva
CO6	Examine the relationship between monetary policy and macroeconomic variables	An	F	Practical Assignment
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Monetary policy		10	15
	1	Definition and objectives of monetary policy	2	
	2	Exchange stabilization Vs price stabilization	3	
	3	Historical Perspective	2	
	4	Role of Central Banks	3	
II	Tools of Monetary policy		10	15
	5	Open Market Operations	2	
	6	Variations in Reserve Requirements	2	
	7	Statutory liquidity ratio	2	
	8	Moral suasion	2	
	9	Selective credit controls	2	
III	Fluctuations in price level		18	25
	10	Inflation-types and causes	4	
	11	Demand pull inflation and test to indicate its presence	3	
	12	Cost push inflation and test to indicate its presence	3	
	13	Inflationary gap	1	
	14	Factors affecting increase and decrease in money income	2	
	15	Measures to control inflation and deflation	2	
	16	Stagflation	1	
	17	Phillips curve	2	
IV	Monetary Policy Implementation		10	15
	18	Transmission Mechanisms	2	
	19	Role of Central Bank Independence	1	
	20	Monetary process and stabilization policy	2	
	21	Lags in monetary policy	2	
	22	Measurement of monetary lags and comparison to fiscal policy lags	3	
V	Open Ended Module		12	
		Discussion on goals of economic stabilisation		
		Practical Assignments to study about the monetary policy and macroeconomic stabilization		
		Seminar to present the student's understanding of monetary policy using a particular economy's experience.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Gyanwaly, R.P. (2014), A Survey on Theories of Inflation: Classical to New Political Macroeconomics. Kathmandu: Sunlight Publication.

ADDITIONAL READINGS

1. Gupta, G.S. (2008), Macroeconomics: Theory and Applications (3rd ed.). New Delhi: McGraw Hill Publishing Company Ltd.
2. Froyen, R.T. (2003), Macroeconomics: Theories and Politics, (7th ed.). New Delhi: Pearson Education.
3. Clower, R.W. (1973), Monetary Theory. England: Penguin.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	-
CO 3		2	-	3	-	-	-
CO 4	-	3	1	3	-	2	2
CO 5	3	-	-	-	3	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	✓
CO 6	✓	✓	✓	

Programme	B.A. Economics				
Course Title	MONETARY POLICY IN INDIA				
Type of Course	Major				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of level 100 – 199				
Course Summary	This course explores the role of central bank in an economy and the effectiveness of monetary policy in achieving economic stability and growth				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the objectives, tools, and framework of monetary policy in India.	U	C	Instructor-created exams / Quiz
CO2	Analyse effectiveness of Indian monetary policy in achieving macroeconomic stability and economic growth	An	F	Practical Assignment
CO3	Explain the role of the Reserve Bank of India in regulating the financial system and managing currency circulation	Ap	F	Seminar Presentation / Group Discussion
CO4	Assess the impact of Indian monetary policy on key macroeconomic variables such as inflation, output, exchange rates, and interest rates	Ap	P	Seminar Presentation / Group Discussion
CO5	Evaluate the current issues faced by Indian monetary authorities in formulating and implementing monetary policy decisions.	An	F	Viva
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Central Banking and Monetary Policy		12	17
	1	Money supply	1	
	2	Background and objectives of monetary policy	2	
	3	Types of monetary policy	2	
	4	Monetary management in an open economy	2	
	5	Impact of monetary policy on macroeconomic variables	3	
	6	Limitations of monetary policy	2	
II	Changing Role and Need of Central Banking		12	17
	7	Origin and evolution of central banking	3	
	8	Role of the central bank in India	2	
	9	Need and rationale of a central bank	2	
	10	Autonomy of central banks	3	
	11	Changing contours of the autonomy of the central bank in India	2	
III	Functions and Regulations of Reserve Bank of India		12	18
	12	Functions of the RBI	3	
	13	Recent developments in currency management	2	
	14	Inflation targeting	2	
	15	Demonetization of currency in India	1	
	16	Crypto currencies and Central Bank Digital Currency	2	
	17	New Banking Licensing Policy	2	
IV	RBI's Monetary Policy Committee (MPC)		12	18
	18	Monetary policy in India during the Pre-MPC Period and formation of the MPC	3	
	19	Purpose, Functions, and Constitution of the MPC	2	
	20	Taylor's rule	2	
	21	The correlation between macroeconomic variables and monetary policy in India	3	
	22	Major Acts related to the RBI	2	
V	Open ended module		12	
		Discussion on monetary policy of the Reserve Bank of India in the last Five Years		
		Practical Assignments on recent policy changes announced by the R.B.I		
		Seminar to present contemporary issues in monetary policy management.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Mishkin, F., Eakins, S. (2017). Financial markets and institutions, 8th ed. Pearson.

ADDITIONAL READINGS

1. Hajela, T.N., (2009) Money and Banking, Ane Books Pvt Ltd., New Delhi.
2. Sundharam KPM, Banking: Theory, Law and Practice, Sultan Chand and Sons, New Delhi (recent edition)
3. Khan, M. (2015). Indian financial system, 9th ed. Tata McGraw-Hill.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7
CO 1	3	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	-
CO 3		2	-	3	-	-	-
CO 4	-	3	1	3	-	2	2
CO 5	3	-	-	-	3	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	✓
CO6	✓	✓	✓	

Programme	B.A. Economics				
Course Title	SECTORAL CONTRIBUTIONS IN INDIAN ECONOMY				
Type of Course	Minor				
Semester	I				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics course of 0-99 level				
Course Summary	This course explores important sectors in an economy, their trends, and compositions				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To provide students with an in-depth understanding of the primary, secondary, and tertiary sectors in the Indian economy.	U	C	Instructor-created exams / Quiz
CO2	To analyze the historical evolution and status of each sector and their contributions to the GDP.	An	P	Practical Assignment / Observation of Practical Skills
CO3	To examine the employment generation and income distribution in each sector.	E	P	Seminar Presentation / Group Discussion
CO4	To evaluate the challenges and opportunities for each sector in the Indian economy.	Ap	F	Instructor-created exams / Home Assignments
CO5	To encourage critical thinking on emerging sectors and open-ended discussions on their potential contributions.	Ap	F	Writing assignments
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to different sectors		8	12
	1	Overview of the primary, secondary, and tertiary sectors	3	
	2	Historical perspective of the sectoral composition in the Indian economy	3	

	3	Importance of analysing sectoral contributions for economic planning	2	
II	Performance of Primary Sector		15	22
	4	Indian agriculture- Role nature and cropping pattern	2	
	5	Trend in agriculture production and productivity	1	
	6	Land reforms	2	
	7	Agriculture input and green revolution	2	
	8	Agriculture marketing and finance	2	
	9	Agriculture price policy	2	
	10	Agriculture subsidy and food security in India	2	
	11	Problems faced by Indian agriculture	2	
III	Performance of the Industrial sector		15	22
	12	Performance of Industries during Plan period	2	
	13	Some basic industries in India- iron and steel, jute, textile, sugar, cement	2	
	14	Role of small scale and cottage industries- Problems faced by cottage industries	3	
	15	Recent industrial policies	2	
	16	Public sector undertakings – role, performance, and problems	2	
	17	Privatisation and disinvestment programmes in India	2	
	18	Problems faced by Indian industries	2	
IV	Performance of the Service sector		10	14
	19	Growth and contribution of service sector in India	3	
	20	Service sector and employment	2	
	21	Information and communication technology	2	
	22	Foreign trade in services	3	
V	Open Ended Module		12	
	1	Discussion based on the new and emerging sectors in the Indian economy		
	2	Assignments on role of different sectors in Kerala economy		
	3	Seminar on contribution of different sectors to National income in the last two years		
	4	Critically evaluate the performance of MSMEs		
	5	Debate on sustainability of service Led Growth		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Uma Kapila, (2018), 'Indian Economy: Performance and Policies, 2018-19', Academic Foundation, New Delhi. (**Module 1,2,3&5**)
2. Misra, S. K. and V. K. Puri, (2018) 'Indian Economy', Himalaya Publishing House, Mumbai. (**Module 1,2,3,4&5**)

3. Datt, Ruddra and K.P.M, Sundaram, (2017), 'Indian Economy', S. Chand & Company Ltd., New Delhi (**Module 1,2,3,4&5**)

ADDITIONAL READINGS

1. Economic Survey of India (1990 onwards)
2. Chetan Ghate, The Oxford Handbook of Indian Economy”, Oxford University Press
3. Chandrasekhar Rao and Mahendra Dev, 2010, Agricultural Price Policy, Farm Profitability and Food Security, EPW, June 26
4. Jayati Ghosh (2008) The Indian Economy 1970-2003 pp1027-1045
5. Rupa Chanda, 2012, Services Led Growth in New Oxford Companion to Economics
6. Jean Dreze and Amartya Sen, 2013, India: An Uncertain Glory, Oxford University Press
7. Ashwini Mahajan, Gaurav Datt, (2018) 'Indian Economy', S. Chand and Company, New Delhi.
8. Brahmananda, P.R. and V.R. Panchmukhi (Eds.), (2001), 'Development Experience in the Indian Economy: Inter-State Perspectives', Bookwell, New Delhi.
9. Gaurav Datt and Ashwani Mahajan, (2016) 'Indian Economy', S Chand Publishing House, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	2	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	-	-	-
CO 3	-	3	-	2	2	-	-	-	-
CO 4	-	2	-	2	-	-	2	3	-
CO 5	-	-	-	-	-	-	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	INDUSTRIAL POLICIES IN INDIA				
Type of Course	MINOR				
Semester	II				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0-99 level				
Course Summary	This course seeks to equip students with the knowledge and skills necessary to contribute thoughtfully to discussions on India's industrial landscape, considering both historical context and future possibilities.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic situation of Indian economy.	U	R	Instructor-created exams / Quiz
CO2	Help the beginning student master the industrial policies for understanding the Indian economy, specific economic issues, and policy alternatives.	U	C	Seminar Presentation / Group Discussion
CO3	Understand and apply the economic perspective and reason accurately and objectively about economic matters in Indian industry.	Ap	P	Instructor-created exams / Home Assignments
CO4	Students will be able to critically evaluate the impact of economic reforms and liberalization measures on India's industrial sector.	An	p	Writing assignments
CO5	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	C	M	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Industrial Development in India		14	20
	1	Extent and Pattern of Industrialisation during the British Rule	2	
	2	Industrial Scene at Independence	3	
	3	Post-independence Industrial Scene	3	
	4	New Economic Policy	3	
	5	Trends and Pattern of Industrial Growth	3	
II	Industrial Policies in India		10	15
	6	Industrial Policy Resolutions;	3	
	7	New industrial policy 1991	3	
	8	LPG	2	
	9	MRTP Act	2	
III	Industries in India		10	15
	10	Large scale industries in India	2	
	11	Traditional and Modern industries	3	
	12	SSI in India	1	
	13	SSI Performance in the globalisation era	2	
	14	Industrial sickness in India- definition, magnitude and causes	2	
IV	Strategies for Disinvestment and Privatisation		14	20
	15	Public versus Private Ownership,	2	
	16	Problems of public sector enterprises	2	
	17	Policy towards public sector since 1991	2	
	18	Privatisation, evolution of privatisation policy in India,;	2	
	19	Proceeds from disinvestment and methodologies adopted	2	
	20	FDI	2	
	21	Disinvestment	1	
	22	Divestment	1	
V	Open ended Module		12	
		Discussion based on the role of liberalization in shaping the industrial landscape		
		Project to encourage creative thinking and the development of innovative solutions to address future challenges in industrial economy		
		Seminar on strategies for enhancing industrial competitiveness in the global market		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Uma Kapila,(2017) *Indian Economy Since Independence* 28th Edition (Module 1, 3 and 4)
2. Ruddar Datt , K, P, M. Sundharam *Indian Economy* (Module 1 and 3)
3. Misra & Puri *Indian Economy* 25th silver jubilee edition (*Module 2, 3 and 4*)

ADDITIONAL READINGS

1. Ishwar C Dhingra : *The Indian Economy: Environment and Policy*, SC Chand & Sons, New Delhi

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	3	2	-	-	2	-
CO 3	-	-	-	1	-	-	3	3	-
CO 4	-	3	-	-	-	-	3	3	-
CO 5	3	-	-	-	-	-	2	3	-
CO 6	-	2	-	3	-	-	-	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓		
CO 6			✓	

Programme	B.A. Economics				
Course Title	AGRICULTURAL DEVELOPMENT IN INDIA				
Type of Course	Minor				
Semester	III				
Academic Level	200 - 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics course of 100 – 199 level				
Course Summary	This course explores the role of agriculture in economic development, the challenges faced by the agricultural sector in India and the policies and technological changes influencing agricultural growth.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the role of agriculture in Indian economy.	U	C	Instructor-created exams / Quiz
CO2	Help student to identify the stages of agricultural development.	R	F	Assignment / Observation of analysing Skills
CO3	Critical Assessment of Productivity Issues	An	P	Seminar Presentation / Group Discussion
CO4	Formulate recommendations for agricultural policy interventions and their role in fostering technological change	C	M	Instructor-created exams / Home Assignments
CO5	Evaluate the determinants of agricultural development in India, considering economic, social, and environmental factors	E	M	Writing assignments
CO6	Apply economics to assess the role and importance of agriculture policy in the Indian economy	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Agriculture and Economic Development		12	17
	1	Role of agriculture in development of Indian economy	2	
	2	Features and progress of agriculture, Linkages between agriculture and other sectors	2	
	3	Three stages of agricultural development	1	
	4	Role of state in different phases of agricultural development	2	
	5	Measures for Agricultural Development	2	
	6	Determinants of Agricultural Development - Technology, Institutional and organization, Capital, Human resources and Natural Resources;	3	
II	Agricultural Production and Productivity		12	17
	7	Trends in Agricultural Production and Productivity	3	
	8	Causes of Low Agricultural Productivity in India	1	
	9	Measures to increase Productivity	1	
	10	Cropping Pattern in India, Factors determining cropping pattern;	2	
	11	Land Reforms, Tenancy Reforms	2	
	12	Consolidation of Holdings	1	
	13	Land reforms in India and their impact on agrarian structure	2	
III	Technological Change in Agriculture		12	18
	14	Strategy for development of Indian agriculture	2	
	15	Green Revolution	2	
	16	Factors responsible for green Revolution, Benefits of Green Revolution	2	
	17	National agricultural policy	3	
	18	The new economic policy and Indian agriculture	3	
IV	WTO and Indian Agriculture		12	18
	19	WTO and India's trade in Agricultural commodities	3	
	20	Measures taken by India to increase exports of Agricultural commodities	3	
	21	WTO and India's imports of agricultural commodities, Steps taken by India to reduce imports of agricultural commodities	3	
	22	WTO and Agricultural Pricing Policy in	3	

		India;	
V	Open Ended Module		12
		Discuss the dominance of certain crops in the global market and its impact on local agriculture	
		Survey with local farmers to assess the local agricultural issues in accessing global markets	
		Seminar on the effectiveness of policies in ensuring sustainability of local agriculture	

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. R.N. Soni and Sangeeta Malhotra : *Leading Issues in Agricultural Economics* (Module 1,2,3 and 4)
2. SK Misra and Puri : *Indian Economy*, 25th silver jubilee edition, Himalaya Publishing House (Module 1 and Module 2)
3. Agarwal A. N. : *Indian Economy: Problems of Development and Planning* (Module 3 and 4)

ADDITIONAL READINGS

1. Ishwar C Dhigra : *The Indian Economy: Environment and Policy*, SC Chand & Sons, New Delhi
2. Ruddar Datt , K, P, M. Sundharam *Indian Economy*

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	2	-	1	-	-	-	-	-
CO 3	-	-	-	3	-	-	2	3	-
CO 4	-	2	1	3	-	-	3	3	-
CO 5		2	-	-	3	-	2	3	-
CO 6	-	1	-	2	2	-	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		
CO 6			✓	

Programme	B.A. Economics				
Course Title	DEVELOPMENT ISSUES IN INDIAN ECONOMY				
Type of Course	Minor				
Semester	I				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	This course explores important issues related to Development such as Poverty, Unemployment, Inequality and Inflation.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Help in understanding the major development issues faced by Indian Economy and its historical precedents.	U	C	Instructor-created exams / Group Discussion.
CO2	Help in analysing the impact of public policy framed to deal with development issues such as Poverty, inequality in income distribution, unemployment and fiscal deficit.	An	F	Instructor-created exams/ Seminars/ Projects
CO3	Help in evaluating the conceptual framework methodology, trends and policy measures adopted regarding the development issues	E	C	Seminar Presentation / Group Discussion
CO4	After studying the development issues of Indian Economy, students will be exposed to economic reforms in India and problems of Indian economy	Ap	P	Instructor-created exams / Home Assignments
CO5	Students will learn how to think critically about public policy issues and made capable of measuring poverty and unemployment in a small region	E	M	Writing assignments/ Group Discussions
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Historical Precedents of Development Issues of Indian Economy		8	12
	1	History of development Issues of Indian Economy	2	
	2	Basic indicators of Development: Real income, Health and Education	2	
	3	Basic issues in economic development	2	
	4	Institutional framework and policy regimes	2	
II	Poverty		13	19
	5	Concepts of poverty- Absolute Measurement of Poverty, Relative measurement of Poverty, Multi -Dimensional Poverty	3	
	6	Poverty Estimation-Poverty Line Calculation- Consumption verses Income levels- Data collection Methods -URP, MRP	4	
	7	Multi-dimensional poverty index.	1	
	8	Post-Independence Poverty Estimation- Tendulkar Committee (2009) -Rangarajan Committee.	2	
	9	Trends of Poverty	1	
	10	Poverty Alleviation Programmes	1	
	11	Economic Characteristics of High- Poverty Groups	1	
III	Inequality		12	17
	12	Income Inequalities in India -Causes of Income Inequalities in India	2	
	13	Measurements of Inequality-Lorenz Curve- Gini coefficient	2	
	14	The Ahluwalia- Chenery Welfare Index	2	
	15	Trends of Inequality in India.	2	
	16	Government Policy to tackle the problem of inequality	2	
	17	Policy Options on Income Inequality and Poverty	2	
IV	Unemployment:		15	22
	18	Types and Structure of unemployment	3	
	19	Conceptual framework of key employment and unemployment indicators:	4	
	20	Nature and Estimates of Unemployment in India	3	
	21	Government Policy for Removing Unemployment	3	
	22	Major Employment Programmes	2	
V	Fiscal Deficit and Inflation in India, Measurements of Poverty and Unemployment		12	
		Discussion based on the trends in fiscal deficit and inflation in India	3	
		A simple project for the Measurement of poverty using MRP method in a Ward of LSG	5	
		A simple project for the Measurement of Unemployment in the local territory using any one methodology	5	

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed

modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Nicholas C. Hope, et al. *Economic Reform in India : Challenges, Prospects, and Lessons*, edited by, Cambridge University Press, 2013. (Module 1)
2. [V.K. Puri](#), [S. K. Misra](#), [Bharat Garg](#) -. *Indian Economy including Union Budget 2023-24*, 2023, Himalaya Publishing House. (Module 2,3,4 and 5)
3. [Uma Kapila](#): *Indian Economy Performance and Policies (23rd edition)*, Academic Foundation. (Module 2,3,4 and 5)
4. Singh, Shrawan Kumar. *Understanding the Indian Economy from the Post-Reforms of 1991, Volume II : Anatomy of the Indian Economy*, Business Expert Press, 2020. (Module 4)
5. Michael P. Todaro, Stephen C. Smith : *Economic Development (12th edition)*, Pearson (Module 1,2,3 and 4)

ADDITIONAL READINGS

1. Sreenivasan, T., Banerjee, A. V., Bardhan, P., & Somanathan, R. (2019). *Poverty and Income Distribution in India*, Juggernaut.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	1	-	-	3	-	-
CO 3	-	-	-	2	-	-	3	-	-
CO 4	-	3	1	2	-	-	3	-	-
CO 5	-	3	-	-	2	-	2	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	TRADE POLICY IN INDIA				
Type of Course	Minor				
Semester	II				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics course of 0 – 99 level				
Course Summary	This course provides students with a comprehensive understanding of the trade policy landscape in India, equipping them with the knowledge and analytical skills necessary to critically evaluate, formulate, and contribute to discussions on trade policies. .				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the fundamental principles and historical evolution of trade policy in India.	R	F	Instructor-created exams / Quiz
CO2	Identify the different phases of India's trade policy development.	U	C	Practical Assignment / Observation of Practical Skills
CO3	Explain the structural changes in India's foreign trade	An	P	Seminar Presentation / Group Discussion
CO4	Apply theoretical knowledge to assess the impact of FDI inflows on specific sectors.	Ap	P	Instructor-created exams / Home Assignments
CO5	Evaluate the effectiveness of India's Foreign Trade Policy 2023 in addressing economic challenges.	E	M	Writing assignments
CO6	Develop recommendations for improving India's trade policies based on the analysis of structural changes.	C	M	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Trade Policy in India		15	22
	1	India's trade policy	2	
	2	Main features of India's trade policy	2	
	3	Phases of India's trade policy	2	
	4	Structural changes in India's Foreign Trade during 1980's and 1990's	3	
	5	Composition of Trade	2	
	6	Direction of Trade	2	
	7	Foreign trade policy 2023	2	
II	India's Balance of Payments		9	13
	8	Balance of Payments,	1	
	9	India's Balance of Payments since 1950	3	
	10	Foreign Exchange Reserves- the theory of reserves and the management of reserves;	3	
	11	Foreign Exchange Rate Policy, Exchange Rate;	2	
III	Foreign Direct And Portfolio Investments		9	13
	12	Evolution of policy regime towards FDI and FPI in India,	2	
	13	MNCs;	1	
	14	FDI Inflows and their impact;	3	
	15	FDI Outflows;	3	
IV	WTO and India's Trade Policy		15	22
	16	GATT - its impact on Indian Economy	2	
	17	TRIMS	2	
	18	TRIPS	2	
	19	WTO – origin,	2	
	20	Objective and structure of WTO	2	
	21	India and WTO	2	
	22	Impact of WTO on various aspects of Indian economy	3	
V	Open Ended Module		12	
		Discussion How SEZs contribute to job creation and technological advancements.		
		Practical Assignments Assess the socio-economic impact of an existing SEZ on the surrounding community.		
		Seminar Identify and analyse the challenges faced by SEZs in various regions.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Uma Kapila,(2017) *Indian Economy Since Independence* 28th Edition (Module 1,2,3 and 4)
2. Ruddar Datt , K, P, M. Sundharam *Indian Economy* (Module 1,2 and 4)
3. Directorate General of Foreign Trade/ Ministry of Commerce and Industry/GOI www.dgft.gov.in (Module 1)

ADDITIONAL READINGS

1. Misra & Puri *Indian Economy* 25th silver jubilee edition Himalaya Publishing House .
2. Ishwar C Dhigra : *The Indian Economy: Environment and Policy*, SC Chand & Sons, New Delhi

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	2	-	-	-		-	-	-
CO 2	-	3	2	-	-	-	2	-	-
CO 3	-	3	-	2	-	-	2	2	-
CO 4	-	2	-	2	-	-	3	3	-
CO 5	-	1	-	2	1	-	3	3	-
CO 6	-	-	-	2	1	-	3	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Program	B.A. Economics				
Course Title	KNOWLEDGE ECONOMY IN INDIA				
Type of Course	Minor				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics Course of 100-199 level				
Course Summary	The course emphasizes the impact of knowledge economy on economic development, by analyzing the historical evolution of knowledge economy in India, importance of human capital in knowledge economy, and the role of innovation in driving the knowledge economy.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept and characteristics of the knowledge economy.	U	C	Instructor-created exams / Quiz
CO2	Analyze the impact of brain drain and brain gain on India's knowledge economy.	An	P	Assignment / Seminar Presentation
CO3	Evaluate the importance of intellectual property rights in fostering innovation.	E	P	Seminar Presentation / Group Discussion
CO4	Apply knowledge economy concepts to real-world scenarios.	Ap	P	Practical Assignments / Case Studies
CO5	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	P	Writing assignments/ Survey / Seminar/ presentation/ Group Discussion
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge(C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to the Knowledge Economy		10	15
	1	Definition and characteristics of the knowledge economy	1	
	2	Evolution of the knowledge economy	2	
	3	Distinction between traditional and knowledge-based economies	2	
	4	Global trends and drivers of the knowledge economy	3	
	5	The role of knowledge in economic development.	2	
II	The Knowledge Economy in India		18	26
	6	Emergence and growth of the knowledge economy in India	4	
	7	Key sectors of the Indian knowledge economy: IT, IT-enabled services, biotechnology, pharmaceuticals, education, R&D	4	
	8	The role of government in promoting the knowledge economy	2	
	9	Challenges and opportunities for the Indian knowledge economy	2	
	10	Impact of the knowledge economy on employment patterns and social dynamics in India.	3	
	11	India's position in the global knowledge economy and its competitiveness.	3	
III	Human Capital and the Knowledge Economy		8	12
	12	The importance of human capital for the knowledge economy	2	
	13	Education and skill development in India	2	
	14	Brain drains and brain gain in the Indian context	2	
	15	Strategies for developing a skilled workforce for the knowledge economy	2	
	16	Policies and initiatives promoting education and human capital development in India.	2	
IV	Innovation and the Knowledge Economy		12	17
	17	Definition of Innovation and Knowledge	2	
	18	The role of innovation in 5 key capabilities or 'E's: Enablers, Education, Engagement, Entrepreneurship and Empowerment, Environment.	2	
	19	The Indian innovation ecosystem: startups, incubators, accelerators	2	
	20	Intellectual property rights and innovation	2	
	21	The role of innovation in driving the knowledge economy	1	
	22	Challenges and opportunities related to IPR in India.	1	
V	Open ended module		12	
	1	Seminar on Building a Sustainable Knowledge Economy in India: Balancing Growth with Equity		
	2	Discussion about the Future of the Knowledge Economy in India		
	3	Practical Assignments Analyse the impact of India's National Skill Development Mission and propose improvements to enhance its effectiveness in training and upskilling the workforce		

		for the knowledge economy.		
	4	Critically evaluate the Inequality and inclusivity in the knowledge economy.		
	5	Organize a debate on Emerging trends in the knowledge economy		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Carl Dahlman and Anuja Utz (2005). *India and the Knowledge Economy*. World Bank publication. (Module 1,2,3,4&5)
2. Kulkarni, A. (2019). *India and the Knowledge Economy: Performance, Perils, and Prospects*. Springer Nature. (Module 1,2,3,4&5)

ADDITIONAL READINGS

1. World Bank. (2012). *India's knowledge economy: Opportunities and challenges*. World Bank Publications
2. Frank-Jurgen Richter and Parthasarathi Banerjee (2003). *The Knowledge Economy in India*. Springer
3. Mehrotra, S. (2012). *The knowledge economy and development in India*. Routledge
4. Ghosh, B. (2010). *India's knowledge economy: Opportunities and challenges*. Bloomsbury Publishing

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	-	-	-
CO 3	-	1	-	3	-	2	2	-	-
CO 4	-	1	-	1	-	-	2	3	-
CO 5	-	1	-	3	2	-	2	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2		✓		✓
CO 3		✓		✓
CO 4			✓	✓
CO 5		✓	✓	

Minor Courses in Quantitative Economics

Programme	B.A. Economics				
Course Title	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS I				
Type of Course	Minor				
Semester	I				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics and Mathematics Course of 0 – 99 level				
Course Summary	This course covers fundamental mathematical skills essential for comprehending various economic terminologies and solving associated problems.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the meaning and significance of mathematical terms commonly used in economics, like averages, ratios, and percentages	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Analyse graphical representations of economic data.	An	C	Instructor-created exams /Practical Assignment
CO3	Evaluate the economic problems using mathematical methods	E	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Apply mathematical models to analyze real-world economic situations	An	C	Instructor-created exams / Home Assignments
CO5	Critically evaluate the assumptions underlying mathematical models and assess their applicability to specific economic situations.	An	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		9	13
	1	Meaning and importance of mathematical economics	2	
	2	Nature of mathematical economics-mathematical v/s nonmathematical economics- mathematical economics versus econometrics	2	
	3	Ingredients of mathematical model-variables constants and parameters- equations and identities	2	
	4	Equations- Linear and nonlinear equations- Variables and parameters - Quadratic equations -solving quadratic equation	3	
II	Set theory		10	15
	4	Set notations	2	
	5	Types of set- Operations of set	2	
	6	Law of set operations	2	
	7	Cartesian product	2	
	8	Ordered pairs	1	
	9	Relations and functions	1	
III	Graphs and Economic Functions		12	17
	11	Equations of straight line- Point of intersection of two lines	2	
	12	Concepts of slope and intercept	2	
	13	Graphical solutions of simultaneous equations	2	
	14	Application of straight lines in economics- Demand and supply analysis- determination of equilibrium price and quantity	3	
	15	Economic functions: Demand function – supply function- utility function- Consumption function- production function- cost function- Revenue function- Saving function- investment function	3	
IV	Basic matrix algebra		17	25
	16	Matrices: Meaning and types	2	
	17	Operations of matrix- Addition, subtraction, multiplication	2	
	18	Determinants-Properties	2	
	19	Inverse of a matrix	3	
	20	Rank, trace and norm of matrix	2	
	21	Solution of equations- Cramer’s Rule	3	
	22	Solution of equations-inverse method	3	
V	Open Ended Module		12	
	1	Assignment – theory part of demand, consumption, cost etc		
	2	Seminar on theory topics		
	3	Draw graphs and diagrams using excel		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22

units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Edward T. Dowling, Introduction to Mathematical Economics (3rd Edition), Schaum's Outline Series, McGRAW-HILL
2. Alpha C Chiang: Fundamental Methods of Mathematical Economics, 2nd Ed. -Inter National Student Edition, Mc Grawhill

ADDITIONAL READINGS

1. Harrison, Michael, and Patrick Waldron. *Mathematics for economics and finance*. Routledge, 2011.
2. Taro Yamane: *Statistics - An Introductory Analysis*, Harper & Row, Edition 3. Geoff Renshaw, *Maths for economics*, 2nd edition, Oxford University Press.
3. Qazi Zameeruddin, Vijay K Khanna, S K Bhambri, *Business Mathematics*, Second Edition, Vikas Publishing House, New Delhi.
4. Sydsaeter, Knut. *Mathematics for economic analysis*. Pearson Education India, 2013.
5. Cvitanic, Jaksa, and Fernando Zapatero. *Introduction to the economics and mathematics of financial markets*. MIT press, 2004.
6. S.P. Gupta: *Statistical Methods*, Sultan Chand and Sons, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	3	-	1	-	-	1	3	2
CO 3	1	3	-	1	-	-	-	-	-
CO 4	1	3	1	2	1	-	-	3	1
CO 5	1	2	-	3	-	1	-	2	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS II				
Type of Course	Minor				
Semester	II				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics and Mathematics Course of 0 – 99 level				
Course Summary	This course aims to equip students with fundamental mathematical skills essential for comprehending various economic terminologies and solving associated problems.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the meaning and significance of mathematical terms commonly used in economics	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Analyse economic data	An	C	Instructor-created exams /Practical Assignment
CO3	Evaluate the economic problems using mathematical methods	E	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Apply mathematical models to analyze real-world economic situations	An	C	Instructor-created exams / Home Assignments
CO5	Critically evaluate the assumptions underlying mathematical models and assess their applicability to specific economic situations.	An	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Derivative and Rules of differentiation		11	16
	1	Limits and continuity	4	
	2	Rules of differentiation	3	
	3	Higher order derivatives	2	
	4	Implicit differentiation	2	
II	Uses of derivatives in economics		14	20
	5	Increasing and Decreasing Functions	2	
	6	Concavity and Convexity	2	
	7	Relative Extreme-Inflection Points	2	
	8	Marginal concepts	2	
	9	Optimization of Functions-conditions	2	
	10	Successive derivative test for optimisation	2	
	11	Relationship among total average and marginal concepts	2	
III	Calculus of multi variable functions		13	19
	12	Functions of Several Variables and Partial Derivatives	2	
	13	Rules of Partial Differentiation	2	
	14	Higher-Order Partial Derivatives	2	
	15	Optimization of Multivariable Functions - Constrained Optimization with Lagrange Multipliers - Significance of the Lagrange Multiplier	3	
	16	Concept of Total and Partial Differentials	2	
	17	Concept of Total Derivatives	2	
IV	Calculus of multi variable functions in economics		10	15
	18	Multivariable functions in economics- Marginal Utility-Marginal Productivity.	2	
	19	Income Determination-Multipliers and Comparative Statics- Income and Cross Price Elasticities of Demand.	2	
	20	Optimization of Multivariable Functions in Economics- Constrained Optimization of Multivariable functions in economics	2	
	21	Cobb Douglass production function- properties	2	
	22	CES production function -properties	2	
V	Open Ended Module		12	
	1	Assignment on theory topics		
	2	Seminar on Production and function		
	3	Discussion on importance of differentiation in economics		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22

units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Edward T. Dowling, Introduction to Mathematical Economics (3rd Edition), Schaum's Outline Series, McGRAW-HILL
2. Alpha C Chiang: Fundamental Methods of Mathematical Economics, 2nd Ed. -Inter National Student Edition, Mc Grawhill

ADDITIONAL READINGS

1. Harrison, Michael, and Patrick Waldron. *Mathematics for economics and finance*. Routledge, 2011.
2. Taro Yamane: Statistics - An Introductory Analysis, Harper & Row, Edition 3. Geoff Renshaw, Maths for economics, 2nd edition, Oxford University Press.
3. Qazi Zameeruddin, Vijay K Khanna, S K Bhambri, Business Mathematics, Second Edition, Vikas Publishing House, New Delhi.
4. Sydsaeter, Knut. *Mathematics for economic analysis*. Pearson Education India, 2013.
5. Cvitanic, Jaksa, and Fernando Zapatero. *Introduction to the economics and mathematics of financial markets*. MIT press, 2004.
6. S.P. Gupta: Statistical Methods, Sultan Chand and Sons, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	3	-	1	-	-	1	-	-
CO 3	1	3	-	1	-	-	-	-	-
CO 4	1	3	1	2	-	-	-	3	2
CO 5	1	2	-	3	-	-	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS III				
Type of Course	Minor				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economics and Mathematics course of 100 – 199 level				
Course Summary	This course aims to equip students with fundamental mathematical skills essential for comprehending various economic terminologies and solving associated problems.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will understand the interdependencies among different sectors of the economy and how input-output tables capture the flow of goods, services, and payments between sectors.	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will understand the concept of integration and its applications in calculating areas under curves, representing cumulative quantities such as total revenue, total cost, and consumer surplus.	An	C	Instructor-created exams /Practical Assignment
CO3	Students will be able to formulate real-world decision-making problems as linear programming models, identifying decision variables, objective functions, and constraints.	E	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Students will apply integral calculus to analyze consumer and producer surplus in market equilibrium, understanding their economic interpretation and implications for welfare analysis	An	C	Instructor-created exams / Home Assignments
CO5	Critically evaluate the assumptions underlying mathematical models and assess their applicability to specific economic situations.	An	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge(C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Integral Calculus: The Indefinite Integral		13	19
	1	Integration.	2	
	2	Rules of Integration	2	
	3	Initial Conditions and Boundary Conditions.	3	
	4	Integration by Substitution- Integration by Parts.	3	
	5	Economic applications	3	
II	Integral Calculus: The Definite Integral		12	18
	6	Area Under a Curve	2	
	7	The Definite Integral.	2	
	8	The Fundamental Theorem of Calculus.	2	
	9	Properties of Definite Integrals.	2	
	10	Area Between Curves	2	
	11	Economic applications	2	
III	Linear Programming and Input Output analysis		14	20
	12	Linear programming: Basic concept, Nature of feasible, basic, and optimal solution	2	
	13	Graphic solution	2	
	14	Primal and dual problem	2	
	15	Input Output Analysis: Open and closed, static and dynamic Leontief system	4	
	16	Matrix of technical coefficients – the Leontief matrix	2	
	17	Hawkins-Simon's conditions for viability	2	
IV	Financial Economics		9	13
	18	Arithmetic and geometric sequence and series	2	
	19	Simple interest, compound interest and annual percentage rates	2	
	20	Net present value and internal rate of return	2	
	21	Annuities, debt repayments, sinking funds	2	
	22	The relationship between interest rates and the price of bonds	1	
V	Open Ended Module		12	
	1	Assignment on consumer surplus and producer surplus theory		
	2	Use Excel for analysis		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Edward T. Dowling, Introduction to Mathematical Economics (3rd Edition), Schaum's Outline Series, McGRAW-HILL(1,2,3)
2. Alpha C Chiang: Fundamental Methods of Mathematical Economics, 2nd Ed. -Inter National Student Edition, Mc Grawhill(1,2,3,4)

ADDITIONAL READINGS

1. Harrison, Michael, and Patrick Waldron. *Mathematics for economics and finance*. Routledge, 2011.
2. Taro Yamane: Statistics - An Introductory Analysis, Harper & Row, Edition 3. Geoff Renshaw, Maths for economics, 2nd edition, Oxford University Press.
3. QaziZameeruddin, Vijay K Khanna, S K Bhambri, Business Mathematics, Second Edition, Vikas Publishing House, New Delhi.
4. Sydsaeter, Knut. *Mathematics for economic analysis*. Pearson Education India, 2013.
5. Cvitanic, Jaksa, and Fernando Zapatero. *Introduction to the economics and mathematics of financial markets*. MIT press, 2004.
6. S.P. Gupta: Statistical Methods, Sultan Chand and Sons, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO08	PSO09
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	3	-	1	-	-	1	-	-
CO 3	-	3	-	1	-	-	-	1	-
CO 4	1	-	1	2	-	3	-	2	-
CO 5	1	2	-	3	-	2	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS IV				
Type of Course	Minor				
Semester	VIII				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Quantitative Economics course of 200 – 299 level				
Course Summary	This course aims to equip students with a comprehensive understanding of economic principles, analytical skills for interpreting real-world data, and the ability to assess and propose solutions to complex economic issues in various sectors.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will recall and demonstrate understanding of key mathematical concepts used in economics, such as calculus, linear algebra, and optimization techniques.	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will apply mathematical tools to solve economic problems, including optimization problems, equilibrium analysis, and dynamic economic modelling.	Ap	C	Instructor-created exams /Practical Assignment
CO3	Students will analyze economic phenomena using mathematical models, including evaluating the effects of policy changes, identifying trade-offs, and assessing the stability and efficiency of economic systems..	An	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Students will critically evaluate the strengths and limitations of mathematical approaches in economics, including considering assumptions, interpreting model results, and assessing the relevance of mathematical techniques to real-world economic issues.	E	C	Instructor-created exams / Home Assignments
CO5	Critically evaluate the assumptions underlying mathematical models and assess their applicability to specific economic situations.	An	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Theory of consumer behaviour		16	23
	1	Basic concepts- Utility function-indifference curve-MRS	2	
	2	Utility maximisation-First and second order conditions-the choice of a utility index-two special cases	2	
	3	Demand function- compensated demand function- demand curve-price and income elasticities of demand	2	
	4	Substitution and income effect-The Slutsky equation- direct effects-cross effects-substitutes and complements	2	
	5	Linear expenditure system	1	
	6	Separable and additive utility functions-	2	
	7	Homogenous and homothetic utility functions	2	
	8	Indirect utility functions and duality theorem	2	
	9	Theory of revealed preference	1	
II	Theory of production		10	15
	10	Production Function – Producers equilibrium – derivation of input demand functions	2	
	11	Cobb-Douglas production function - CES production function -VES production function- Translog production.	4	
	12	Cost function: Derivation of cost as a function of output-Duality - Shepherd's lemma-	2	
	13	Technological progress and production function.	2	
III	Mathematical treatment of market equilibrium		14	20
	14	Equilibrium under perfect competitive market- an application to taxation	2	
	15	Profit maximisation under monopoly- price discrimination under monopoly	3	
	16	Multi-plant monopolist-multiple product monopolist- taxation and monopoly output- revenue maximizing monopolist	3	
	17	Duopoly and oligopoly: Homogenous product quasi competitive solution-The Cournot and stackleberg solution	4	
	18	Duopoly and oligopoly: Differentiated product- Market shares solution-kinked demand curve solution	2	
IV	Optimisation over time		8	12
	19	Basic concepts- Bond market- market rate of reurn-discount rate and present value	2	
	20	Multi period consumption	2	
	21	Investment theory of a firm	2	
	22	Interest rate determination	2	
V	Open Ended Module		12	
	1	Discussion on the characteristics of different types of market		
	2	Assignment on monopolistic competition		
	3	Cartels and price leadership		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-

ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. J.M Henderson and R.E Quandt (1980): *Microeconomic Theory: A Mathematical Approach*- McGraw Hill International Ltd.
2. Edward T. Dowling, *Introduction to Mathematical Economics* (3rd Edition), Schaum’s Outline Series, McGRAW-HILL
3. Alpha C Chiang: *Fundamental Methods of Mathematical Economics*, 2nd Ed. -Inter National Student Edition, Mc Grawhill

ADDITIONAL READINGS

1. Harrison, Michael, and Patrick Waldron. *Mathematics for economics and finance*. Routledge, 2011.
2. Taro Yamane: *Statistics - An Introductory Analysis*, Harper & Row, Edition 3. Geoff Renshaw, *Maths for economics*, 2nd edition, Oxford University Press.
3. QaziZameeruddin, Vijay K Khanna, S K Bhambri, *Business Mathematics*, Second Edition, Vikas Publishing House, New Delhi.
4. Sydsaeter, Knut. *Mathematics for economic analysis*. Pearson Education India, 2013.
5. Cvitanic, Jaks, and Fernando Zapatero. *Introduction to the economics and mathematics of financial markets*. MIT press, 2004.
6. S.P. Gupta: *Statistical Methods*, Sultan Chand and Sons, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	3	-	1	-	-	1	-	-
CO 3	-	3	-	1	-	-	-	1	-
CO 4	1	-	1	2	-	3	-	2	-
CO 5	1	2	-	3	-	2	3	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	ELEMENTARY TOOLS FOR ECONOMIC DATA ANALYSIS 1				
Type of Course	Minor				
Semester	I				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics and Statistics Course of 0 – 99 level				
Course Summary	This course explores important issues related to information collection methods, arrangement of information and different technique of information presentation.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Helps to understand the principles behind different data collection techniques. Helps to Compare and contrast various classification algorithms.	U	C	Instructor-created exams / Group Discussion.
CO2	Helps to demonstrate the use of different data collection tools and techniques in real-world scenarios. Implement data classification algorithms on sample datasets. Solve problems related to data collection and classification using appropriate methods.	Ap	F	Instructor-created exams/ Seminars/ Projects
CO3	Helps to evaluate the strengths and weaknesses of different data collection methods and sampling methods. Makes the students able to assess the performance of classification algorithms in terms of accuracy and efficiency.	An	C	Seminar Presentation / Group Discussion
CO4	Apply data collection and classification techniques to real-world problems in diverse domains such as healthcare, finance, or marketing. Develop a project that involves collecting and classifying data to solve a practical issue.	Ap	C	Instructor-created exams / Home Assignments
CO5	Helps the students to develop a Design and to implement a comprehensive data collection and classification strategy for a complex problem.	C	F	Writing assignments/ Presentations
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Economic Data		8	12
	1	What is Economic Data? Usages of Economic Data.	2	
	2	Types and Features of Economic Data- Primary and Secondary Data	1	
	3	Sources of Economic Data.	1	
	4	Methods of Data Collection-Census and Sample survey	2	
	5	Planning the survey-Stages	2	
II	Sampling and Sample Designs		14	20
	6	Theoretical Basis of Sampling-Law of Statistical regularity, law of Inertia of large numbers	2	
	7	Method of sampling- Probability and Non probability sampling	2	
	8	Probability sampling methods-Simple Random Sampling, Stratified random sampling- proportionate and Dis proportionate stratified sampling, systematic sampling	4	
	9	Non probability sampling -Judgement sampling, convenience sampling, quota sampling	2	
	10	Determination of sample size	2	
	11	Merits and Limitations of Sampling	1	
	12	Sampling and Non Sampling Errors	1	
III	Arrangements of Data		10	15
	13	Need for arranging Data	1	
	14	Types of Data Classification-Geographical, Chronological, Quantitative and Qualitative.	3	
	15	Construction of Frequency Distribution- Discrete and Continuous Frequency distribution	6	
IV	Data presentation methods		16	23
	16	Tables- Simple and Complex tables	2	
	17	Diagrams-Bar Diagrams- Pie Diagrams-Three Dimensional diagrams-	2	
	18	Choice of a suitable diagram	1	
	19	Graphs-graphs of time series- Two scale graphs-Range chart- Band graph- Semi logarithmic Line graphs	4	
	20	Arithmetic and Ratio scale Graph	1	
	21	Graphs of frequency Distribution- Frequency polygon- frequency curve- histogram-ogives- less than and more than ogives.	5	
	22	Limitations of Diagrams and Graphs	1	
V	Open Ended Module		12	
		Assignments on preparing questionnaires related to a relevant Economic phenomenon.		
		Data Management using spread sheet- Graphical presentation of Data-Line, Bar and Pie Diagrams		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, is only for the external examination.

References

1. S.C. Gupta., *Fundamentals of Statistics*. Mumbai: Himalaya Publishing Company. (Module 1,2,3 and 4)
2. S.P.Gupta. *Statistical Methods*, New Delhi: Sulthan Chand & Sons .(Module 1,2,3 and 4)

Additional Readings

1. Anderson, Sweeny, & Williams. (n.d.). *Statistics for business and Economics*. Thompson Education.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	3	-	-	-	-	-	-		
CO 2	-	3	-	1	-	-	2		
CO 3	3	-	-	1	-	-	-		
CO 4	-	3	1	2	-	-	3	3	
CO 5	3	-	-	-	-	-	2		3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	ELEMENTARY TOOLS FOR ECONOMIC DATA ANALYSIS II				
Type of Course	Minor				
Semester	II				
Academic Level	100-199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics and Mathematics course of 0 – 99 level				
Course Summary	This course explores important issues related to different measures of Central tendency, Dispersion, Skewness, Kurtosis and Moments. The course provides the knowledge on the wise and timely use of the descriptive statistics in Economics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Helps to understand the different, statistical measures commonly used in data analysis.	U	C	Instructor-created exams / Group Discussion.
CO2	Students will be able to apply various measures of central tendency, dispersion, skewness, kurtosis, and moments to analyze and interpret economic data effectively.	Ap	C	Instructor- created exams/ Seminars/ Projects
CO3	The course will help the students to evaluate the appropriateness of different descriptive statistical techniques in various economic contexts, demonstrating critical thinking and analytical skills.	An	F	Seminar Presentation / Group Discussion
CO4	The students will be made capable of demonstrate proficiency in utilizing descriptive statistics to summarize, interpret, and communicate economic data accurately and persuasively.	Ap	C	Instructor-created exams / Home Assignments
CO5	Students will be able to analyse the reliability and limitations of descriptive statistics in economic analysis, enabling informed decision-making in real-world scenarios.	An	F	Writing assignments/ Presentations
CO6	The students will be made capable to demonstrate the ability to communicate complex statistical concepts and their economic implications clearly and coherently to diverse stakeholders, fostering effective collaboration and decision-making.	C	F	Assignments to solve practical data set

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)

- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Measures of Central Tendency		12	18
	1	Requisites of a good average	1	
	2	Arithmetic mean- calculation, properties- merits and demerits- weighted and combined arithmetic mean	3	
	3	Median- and other partition values- calculation- graphic method- merits and demerits.	2	
	4	Mode- Computation – Graphic Location- Merits and demerits	2	
	5	Harmonic Mean and Geometric mean- computations- Mathematical Properties- Uses	3	
	6	Relationship among Averages	1	
II	Measures of Dispersion		23	34
	7	Meaning, objectives and significance of the measures of dispersion	2	
	8	Characteristics of an ideal measure of dispersion	2	
	9	Absolute and relative measures of dispersion	2	
	10	Range- Computation- merits and demerits- uses	1	
	11	Quartile deviation- computation- merits and demerits	2	
	12	Mean Deviation-computation- mean deviation about mean- mean deviation about median- relative measure- merits and demerits uses of mean deviation.	3	
	13	Standard deviation- computation- mathematical properties- combined standard deviation- variance- coefficient of variation- merits and demerits of standard deviation	5	
	14	Standard Deviation of a combined series	2	
	15	Lorenz curve- Ginni Coefficient-	2	
	16	Relations between various measures of dispersion	2	
III	Skewness and Kurtosis		8	11
	17	Skewness- measures of skewness- Karl Pearson's coefficient of skewness- Bowley's measure of Skewness- Kelly's measure of skewness.	5	
	18	Kurtosis- meaning and interpretations-measures of kurtosis	3	
IV	Moments		5	7
	19	Relations between central and raw moments	2	
	20	Sheppard's correction for grouping errors.	1	
	21	Pearson's β and γ coefficients based on moments	1	
	22	Coefficient of skewness based on moments.	1	
V	Open ended module		12	
	23	Diagrammatic illustrations of possible averages and Dispersion measures		
	24	Comprehensive understanding of a frequency distribution with measures of central tendency, dispersion, skewness and Kurtosis.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22

units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

References

1. S.C. Gupta., *Fundamentals of Statistics*. Mumbai: Himalaya Publishing Company.
2. S.P.Gupta. *Statistical Methods*, New Delhi: Sulthan Chand & Sons

Additional Readings

1. Anderson, Sweeny, & Williams. (n.d.). *Statistics for business and Economics*. Thompson Education.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2	-	-
CO 3	3	-	-	1	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	3	2
CO 5	3	-	-	-	-	-	2	3	3
CO 6	-	2	2	3	3	-	3	2	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		
CO 6				

Programme	B.A. Economics				
Course Title	ELEMENTARY TOOLS FOR ECONOMIC DATA ANALYSIS III				
Type of Course	Minor				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Elementary Course on central tendency, Dispersion, Skewness, Kurtosis and Moments of level 100 – 199				
Course Summary	This course provides knowledge on correlation, Regression, Time series and Index numbers and its economic application				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Helps to understand the significance of correlation and regression coefficients in economic analysis.	U	C	Instructor-created exams / Group Discussion.
CO2	Students will be able to analyse various economic phenomenon in the light of correlation, regression and coefficient of determination.	An	F	Instructor- created exams/ Seminars/ Projects
CO3	The student will be able to evaluate the economic phenomenon such as inflation, growth etc. by using the knowledge on index numbers and time series.	E	p	Seminar Presentation / Group Discussion
CO4	The students will be made capable of demonstrate proficiency in utilizing inferential statistics to summarize, interpret, and communicate economic data accurately and persuasively.	Ap	C	Instructor-created exams / Home Assignments
CO5	Students will be able to analyse the economic data with the help of softwares and capable of constructing simple models incorporating regression coefficients	C	F	Writing assignments/ Presentations
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Correlation Analysis		11	16
	1	Meaning and Types of Correlation	2	
	2	Methods of Studying correlation- scatter diagram- Correlation graph- Karl Pearson's Coefficient of correlation-rank Correlation- Method of concurrent Deviation	4	
	3	Properties of Correlation coefficient-Probable error	2	
	4	Coefficient of Determination- Meaning, Problems and Interpretation.	2	
	5	Lag and lead correlation	1	
II	Linear Regression Analysis		11	16
	6	Meaning, types and Uses of Regression	2	
	7	Difference between Correlation and Regression	1	
	8	Regression Lines- X on Y and Y on X- Uses of Regression lines on Prediction	4	
	9	Calculation for regression equations- method of Least Squares	2	
	10	Properties of Regression coefficients	1	
	11	Standard error of an estimate	1	
III	Index Numbers		15	22
	12	Meaning, Uses and Types of index numbers	1	
	13	Problems in the construction of index numbers	1	
	14	Methods of Constructing Index Numbers- Simple Aggregate Method, weighted Aggregate Method, Simple Average of Price Relatives and Weighted average of price relatives	5	
	15	Tests of index numbers- unit test- Time reversal test- factor reversal test- Circular test	2	
	16	Fixed base and chain based index numbers	2	
	17	Base shifting- splicing and deflating of index numbers	1	
	18	Cost of living index numbers- steps in the construction- uses of cost of living index numbers	2	
	19	Limitations of index numbers	1	
	IV	Introduction to Time Series Analysis		
20		What is Time series? Components of Time Series	3	
21		Measurement of Trend- graphic method- Method of Semi Averages- Method of Curve fitting by Principle of Least squares	4	
22		Measurement of Seasonal Variations- Simple average method- ratio to trend method-Ratio to moving average- method of link relatives- Deseasonalisation of data	4	
V	Open Ended Module		12	
		CPI, WPI and Stock Price Indices- BSE-SENSEX and NSE-NIFTY		
		Calculation of correlation and regression using Excel		
		Trend line fitting in excel		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

References

1. S.C. Gupta., *Fundamentals of Statistics*. Mumbai: Himalaya Publishing Company.(Module 1,2,3 and 4)
2. S.P.Gupta. *Statistical Methods*, New Delhi: Sulthan Chand & Sons .(Module 1,2,3 and 4)

Additional Readings

1. Anderson, Sweeny, & Williams. (n.d.). *Statistics for business and Economics*. Thompson Education.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-		
CO 2	-	3	-	1	-	-	2		
CO 3	3	-	-	1	-	-	-		
CO 4	-	3	1	2	-	-	3	2	
CO 5	3	-	-	-	-	-	2	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		
CO 6				

Programme	B.A. Economics				
Course Title	ELEMENTARY TOOLS FOR ECONOMIC DATA ANALYSIS IV				
Type of Course	Minor				
Semester	VIII				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Elementary knowledge on Estimation theory, Testing of Hypothesis and Descriptive Statistics of level 200 – 299				
Course Summary	This course provides knowledge on F test, ANOVA, Interpolation and extrapolation and interpretation of data and statistical fallacies essential for economic data analysis and conducting economic research.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Helps to understand the purpose of the F test in comparing variances or testing the equality of means, how ANOVA compares means across multiple groups or factors. Helps to Interpret interpolated values and their significance in the context of data analysis and helps to recognize the importance of accurate data interpretation in research and decision-making.	U	C	Instructor-created exams / Group Discussion.
CO2	Students will be able to analyse various economic research problems using F test and ANOVA . Compare and contrast different interpolation methods based on their suitability for specific datasets.	An	F	Instructor-created exams/ Seminars/ Projects
CO3	Helps to evaluate the appropriateness of using ANOVA in different research contexts, Assess the reliability of interpolated values in decision-making contexts and the potential impact of inaccuracies. Evaluate the impact of accurate data interpretation on decision-making processes and public perception.	E	p	Seminar Presentation / Group Discussion
CO4	The students will be made capable of applying interpolation techniques to estimate missing or intermediate values within a dataset.	Ap	C	Instructor-created exams / Home Assignments
CO5	Helps the students to design experimental studies or research questions suitable for ANOVA analysis. To design interpolation strategies for datasets with	C	F	Writing assignments/ Presentations

irregular or missing data points. Synthesize findings from multiple sources to form well-founded interpretations and conclusions.			
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)			

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
			10	15
	1	F Statistic	2	
	2	Critical values of F distribution	2	
	3	Chief features of F Distribution	2	
	4	Applications of F distribution	2	
	5	Relation between t, F and Chi-square Distribution	2	
II	Analysis of Variance		13	19
	6	ANOVA-Meaning, Definition and Assumptions	2	
	7	One way Classification	3	
	8	Hypothesis testing	3	
	9	Two Way classification	5	
III	Interpolation and Extrapolation		14	20
	10	Meaning and assumptions	1	
	11	Uses of Interpolation	2	
	12	Methods of Interpolation	2	
	13	Graphic Method	2	
	14	Algebraic method	2	
	15	Method of Parabolic curve fitting	2	
	16	Interpolation with arguments at unequal intervals	2	
	17	Inverse interpolation	1	
IV	Interpretation of Data and statistical Fallacies		11	16
	18	Interpretation of Data and statistical Fallacies- meaning and need	2	
	19	Factors leading to mis-interpretation of Data	2	
	20	Bias, Inconsistencies of definition, faulty generalization and inappropriate comparisons	2	
	21	Wrong interpretation of statistical measures.	3	
	22	Effect of wrong interpretation of data	2	
V	Open Ended Module		12	
		Perform a one-way ANOVA to determine if there are significant differences in test scores between the three schools.		
		Obtain data on the yield of crops from different fields across two regions (Region A, Region B) and two soil types (Sandy, Clayey). Perform a two-way ANOVA to examine the effects of region and soil type on crop yield.		
		Provide students with a data set containing a series of measurements taken at regular intervals, with some missing values.		

		Instruct students to use linear interpolation to estimate the missing values based on the neighboring data points.		
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Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

References

1. S.C. Gupta., *Fundamentals of Statistics*. Mumbai: Himalaya Publishing Company.(Module 1,2,3 and 4)
2. S.P.Gupta. *Statistical Methods*, New Delhi: Sulthan Chand & Sons .(Module 1,2,3 and 4)

Additional Readings

1. Anderson, Sweeny, & Williams. (n.d.). *Statistics for business and Economics*. Thompson Education.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-		
CO 2	-	3	-	1	-	-	2		
CO 3	3	-	-	1	-	-	-		
CO 4	-	3	1	2	-	-	3	2	
CO 5	3	-	-	-	-	-	2	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Field work and project report (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Field work- project	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓			✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓		
CO 6				

Vocational Minor Courses in Economics

Programme	B.A. Economics				
Course Title	BASICS OF INCOME TAX				
Type of Course	Vocational Minor				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Introductory Macro Economics course of 0 – 99 level				
Course Summary	This course focus on imparting basic knowledge and equip students with application of principles and provisions of Income - tax Act, 1961 amended up to date.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic concept and terms of Income Tax	U	C	Instructor-created exams / Quiz
CO2	Analyse Income Tax Statements and Tax Planning	An	P	Practical Assignment
CO3	Evaluate Various Sources of Income and Deductions	E	F	Seminar Presentation / Group Discussion
CO4	Apply Tax Planning Techniques	Ap	P	Instructor-created exams / Home Assignments
CO5	Create Tax Return Preparators (TRP)	Ap	F	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Income Tax		10	15
	1	Basic Concepts- Purpose of Income Tax - Basic Terms of Income Tax	2	
	2	Income tax Act 1961, Recent Financial Amendments regarding Income Tax	2	
	3	Direct and Indirect Taxes	2	
	4	Income - Agricultural income - Person - Assessee - Assessment Year - Previous Year -	2	
	5	Gross total income - Total income - Residential status - Scope of total income on the basis of residential status –Exempted incomes.	2	
II	Income Tax Calculation		17	25
	6	Computation of Income under Different Heads	3	
	7	Deductions to be made in computing total income	3	
	8	Computation of total Income of individuals	3	
	9	Computation of Tax liability of individuals	3	
	10	Rebate and relief of tax	3	
	11	Recent Income Tax Slabs for Calculation	2	
III	Income Tax Return Filing		14	20
	12	Procedure of assessment of income tax	2	
	13	Filing of returns of income, ITR 1	2	
	14	Voluntary return of income – Statutory obligations in the filing of returns – Return of loss – Belated returns	2	
	15	Revised returns – Defective returns – PAN	2	
	16	Different types of assessment – Self-assessment – Assessment on the basis of return – Best judgment assessment – Regular assessment	2	
	17	Reassessment	1	
	18	Protective assessment	1	
	19	Key Dates for Return Filing	1	
	20	Penalties for Late Return	1	
	IV	Income Tax Planning		
21		Individual Tax Planning- Evasion-Avoidance-Refund	4	
22		Powers of Income Tax Authorities	3	
V	Open ended module		12	
		Discussion -Income tax heads and deductions		
		Practical Assignments Income Tax Calculation and Return Filing		
		E-return filing -ITR1 Practical Return Filing		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-

ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Dr. H.C Mehrotra and Dr. S.P. Goyal (2022). Fundamentals of Income Tax A.Y 2022-23 (Module I,II,III, and IV)

ADDITIONAL READINGS

1. Henry Harvin.(2023).Income Tax Practices
2. Vinod K. Singhania & Kapil Singhania (2023). Direct Taxes Law & Practice | Professional Edition

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO 9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	-	-	-	-	-	3	2	-
CO 3	-	-	-	3	-	-	2	2	-
CO 4	-	-	-	2	-	-	3	2	-
CO 5	-	-	-	1	-	-	2	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	CALCULATION OF INCOME FOR TAXATION				
Type of Course	Vocational Minor				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic economics course of 0 – 99 level				
Course Summary	This course focuses on various aspects of income tax calculations, basic components of income, tax deductions, tax exemptions and tax regimes.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the relevance of accurate income tax calculation.	U	C	Instructor-created exams / Practical Assignment
CO2	To understand the basic elements of income tax calculation.	U	F	Writing assignments / Quiz
CO3	To analyze the major components of income.	An	P	Observation of Practical Skills / Group Discussion
CO4	To analyze the impact of tax deductions and exemptions on taxable incomes.	An	P	Observation of Practical Skills / Home Assignments
CO5	To accurately compute income for taxation.	Ap	P	Practical Skills / Instructor-created exams
CO6	To compute tax liability under old and new tax regimes and to evaluate the most appropriate tax regime choice.	E	M	Practical Assignment Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	BASIC ELEMENTS OF INCOME CALCULATION		10	15
	1	Relevance of accurate income calculation	2	
	2	Gross income and taxable income	2	
	3	Exempted income for all assesses	3	
	4	Residential status and tax liabilities	3	
II	INCOME FROM SALARY AND HOUSE PROPERTY		16	23
	5	Components of salaried income	1	
	6	Exempt portion of HRA and LTA	2	
	7	Impact of standard deduction on taxable income	1	
	8	Deductions from gross salary	2	
	9	Computation of income from salary	2	
	10	Computation of income from house property	2	
	11	Exempted Income from house properties.	2	
	12	Rules regarding valuation.	2	
	13	Determining annual value, deductions and taxable income from house property	2	
III	INCOME FROM BUSINESS/PROFESSION AND CAPITAL GAIN		10	15
	14	Profits and Gains of business/ Profession	3	
	15	Deductions expressly allowed in respect to expenses and allowances	2	
	16	Computation of income from business	3	
	17	Tax treatment of self-employed individuals	2	
IV	INCOME FROM CAPITAL GAIN		12	17
	18	Meaning and types of capital gains	2	
	19	Computation of Short term and Long Term Capital Gain/Loss	3	
	20	Exemption of Capital Gains	2	
	21	Calculation of cost of Original Shares & Bonus Shares	3	
	22	Income from other sources	2	
V	Open ended module		12	
		Discussion based on tax saving investments and impact of exemptions on taxable income.		
		Practical Assignments to calculate tax liability under old and new tax slabs		
		Assessment and evaluation of factors influencing the choice between old and new regimes.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Gaur V.P. & Narang D.B., Income Tax Law and Practice, Kalyani Publishers.
2. Bhagwati Prasad ., Income Tax Law And Practice ,Wishwa Prakashan Publishers,

3. T.S.Reddy & Y.Harry Prasad Reddy, Income Tax Law and Practice, Margham Publications.
4. Vuinod K Singhania and Kapil Singhania, Direct Taxes, Taxman Allied Services Pvt. Ltd.
5. N. Hariharan, Income Tax Law and Practice, Tata McGraw Hill publishing Co. Ltd, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	2	1	-2	-	-	3	2	2
CO 2	3	1	-	2	-	-	2	2	2
CO 3	2	2	-	1	-	1	3	3	3
CO 4	2	3	2	1		1	3	3	3
CO 5	2	2	1	1	-	1	3	3	3
CO 6	-	2	2	2	2	-	3	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	INCOME TAX ASSESSMENT				
Type of Course	Vocational Minor				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basics Course on Income Tax of level 100 – 199				
Course Summary	This particular course is intended to impart knowledge on assessment procedure and filing of return of income of various assessee and to provide practical skills on computation of total income and tax liability of individuals, HUF and Firms.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the rationale and procedure of Tax Assessment	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Analyse the concept of clubbing and aggregation of income.	An	C	Instructor-created exams /Practical Assignment
CO3	Evaluate the various legal provisions of tax planning	E	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Apply tax computation procedure to Individual and HUF	An	C	Instructor-created exams / Home Assignments
CO5	Computation of tax liabilities of entities	An	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Tax Assessment		12	17
	1	Assessment- Definition, Objectives and Types	2	
	2	Assessment year Section 2(9), Previous Year –Exception rules	1	
	3	Person Section 2 (31)	1	
	4	Types of Income- Total Income, Casual Income, Assessment Income	2	
	5	Rate of Income tax for the assessment Year	1	
	6	Assessment, filing and Payment of Tax	1	
	7	Return –Meaning of return – Types of return	2	
	8	Forms Prescribed for filing of return	1	
	9	PAN – Compulsory cases of PAN.	1	
II	Clubbing and Aggregation of Income		12	17
	10	Clubbing and Aggregation of Income-Objectives	3	
	11	Types of Income for Clubbing	3	
	12	Provisions for Clubbing and Aggregation	3	
	13	Set off and carry forward of losses: Provisions	3	
III	Tax Assessment (Theory Only)		15	22
	14	Assessment of Individuals - Various sources of income of an individual	3	
	15	Procedure for computing Total Income	3	
	16	Assessment of Hindu Undivided Family – HUF v/sFirm –	2	
	17	Incomes not treated as family income	2	
	18	Assessment of Firms –Classification of firms	2	
	19	Section 184- Computation of Tax Liability	3	
IV	Tax Planning Strategies		9	14
	20	Effective Tax Planning Techniques	3	
	21	Tax Avoidance and Tax Evasion	3	
	22	Deductions under 80C	3	
V	Open Ended Module		12	
	1	Discussing recent tax laws		
	2	Analysing real life case studies related to tax assessment		
	3	File the income tax return of any Two individual		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Income Tax, Vinod K. Sinhanian & Monica Sinhanian, Taxmann Publications Pvt.Ltd, New Delhi.
2. Taxation Law & Practice, Mehtrotra & Goyal, Sahitya Bhavan Publication, Agra.

ADDITIONAL READINGS

1. Systematic Approach to Income Tax, Garish Abuja& Ravi Gupta, Bharat Law House Pvt. Ltd, New Delhi.
2. Girish Ahuja and Ravi Gupta: Professional Approach to Direct Taxes Law & Practice; Bharat Law House, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	1	3	-	1	-	-	1	3	2
CO 3	1	3	-	1	-	-	-	-	-
CO 4	1	3	1	2	-	-	-	3	1
CO 5	1	2	-	3	-	-	-	2	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar/Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	INCOME TAX LAWS PROCEDURES AND AUTHORITIES				
Type of Course	Vocational Minor				
Semester	VIII				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Income Tax course of 200 – 299 level				
Course Summary	This course aims to provide basic knowledge about the principles and provisions of income tax, as well as its authority, and to equip students with the application of the Income Tax Act.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category	Evaluation Tools used
CO1	Understand the basic concepts, procedures and authorities of income tax.	U	C	Instructor-created exams / Quiz
CO2	Identification of income tax from various sources and analysis of its interdependence and differences.	An	P	Practical Assignment
CO3	To apply income tax procedures in real life situations.	Ap	F	Seminar Presentation / Group Discussion
CO4	Assessment of income tax procedures across personal, business, and other areas with the relevant authorities.	Ap	C	Instructor-created exams / Home Assignments
CO5	Evaluate the components of income tax laws and apply them to the present tax situation.	E	M	Viva
CO6				
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Basic Concepts under Income Tax		11	16
	1	Income from salary and house property	2	
	2	Income from business and profession	2	
	3	Determination of agricultural and Non-agricultural income	2	
	4	Casual Income, Capital gains and Income from other sources.	4	
	5	Gross total income , Total income	1	
II	Computation of Income tax and Tax liability		12	18
	6	Determination of residential status	2	
	7	Classification of income under different heads	2	
	8	Computation of income under each head	2	
	9	Clubbing of income of spouse, minor child etc.	1	
	10	Computation of Gross Total Income (GTI)	2	
	11	Deduction from GTI	1	
	12	Computation of Taxable income and computation of tax liability	2	
III	Components of Income Tax Law		12	18
	13	Type of taxes – Direct taxes and Indirect taxes	2	
	14	Classifications – Income tax – Tax on undisclosed foreign income and assets – Goods and Services tax (GST) – Customs duty.	3	
	15	Income tax Act 1961	2	
	16	Annual Finance Act	1	
	17	Income tax rules, Circulars and Notifications	3	
	18	Legal decisions	1	
IV	Income Tax Authorities and their powers		13	18
	19	Roles and responsibilities of income tax authorities.	3	
	20	Powers of income tax authorities	3	
	21	Classification of income tax authorities – Administrative and Judicial authorities - Central Board of Direct Taxes, Commissioner, a Joint Commissioner, a Director, a Joint Director, an Assistant Director or a Deputy Director or an Assessing Officer, or a Tax Recovery Officer	4	
	22	Jurisdictional aspects and transfer of cases	3	
	Open Ended Module		12	
V	1	Examine and contrast tax evasion, avoidance, and planning concerning personal, organizational, and corporate income tax filings.		
	2	Prepare income tax statements for Individuals, Organizations and Companies.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed

modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Dr. H.C. Mehrotra and Dr. S.P Goyal, Income Tax Law and Account, 64th Edition, Sahitya Bhawan Publications.

ADDITIONAL READINGS:

1. Girish Ahuja and : Systematic Approach to Income-tax, Service Tax and VAT; Bharat Law Ravi Gupta House, T-1/95, Mangolpuri Industrial Area, Phase I, New Delhi-110 083. (Edition based on provisions applicable for AY 2017-18)
2. B. B. Lal and N. Vashist : Direct Taxes, Income Tax, and Tax Planning; Darling Kindersley (India) Pvt. Ltd., 482, FIE, Patparganj, Delhi.-110092 (Edition based on provisions applicable for AY 2017-18)
3. Dr. H. C. Mehrotra and : Direct Taxes (with Tax Planning); Sahitya Bhawan, Agra. (Edition based Dr. S.P. Goyal on provisions applicable for AY 2017-18)
4. Girish Ahuja and : Professional Approach to Direct Taxes Law & Practice; Bharat Publications Ravi Gupta (Edition based on provisions applicable for AY 2017-18)
5. Vikas Mundra : Tax Laws and Practices; Law Point publications, 6C, R.N. Mukherjee Road, Kolkata- 700001 (edition based on provisions applicable for AY 2017-18)
6. V. S. Datey : Service Tax Ready Reckoner; Taxmann Publications, 59/32, New Rohtak Road, New Delhi
7. J. K. Mittal : Law, Practice & Procedure of Service Tax; CCH India, (Walters Kluwer (India) Pvt. Ltd.), 501-A, Devika Tower, 6 Nehru Place, New Delhi.
7. Balram Sangal and : All India VAT manual (4 Vols.); Commercial Law Publisheres (India) Pvt Jagdish Rai Goel Ltd., 151, Rajindra Market, Opp. Tis Hazari Courts, Delhi – 110 054
8. GST : Introduction and way Forward – Bloom Bury publication

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	2	-	-	2	3	3
CO 3		2	-	2	-		-	2	3
CO 4	-	3	2	3	-	2	3	3	-
CO 5	3	-	-	-	-	2	2	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓	✓	

Programme	B.A. Economics				
Course Title	FOUNDATIONS OF GST				
Type of Course	Vocational Minor				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic Economics Course of 0-99 level				
Course Summary	This course provides a comprehensive introduction to GST, covering its features, application, applicability and practical implementation.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category	Evaluation Tools used
CO1	Understand the fundamentals of GST, its Features, framework and constitutional provision	R	F	Instructor-created exams / Quiz
CO2	Gain ability to differentiate supply of goods and services	An	C	Seminar Presentation / Group Discussion
CO3	Determining time and place of supply of goods and services	E	P	Seminar Presentation / Group Discussion
CO4	Determining value of supply of goods and services	E	P	Writing assignments
CO5	To Understand the exempted goods and services	U	P	Instructor-created exams / Quiz
CO6	To explore the scope and conditions of composition levy	An	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to GST		12	17
	1	Meaning and features of Goods and Service Tax (GST)	2	
	2	Background, Necessity and implementation of GST	2	
	3	Benefits of GST	2	
	4	Taxes subsumed in GST	1	
	5	Framework of Goods and Services Tax	2	
	6	Constitutional provision	3	
II	Supply under GST		12	17
	7	Meaning and scope of Supply	2	
	8	Deemed Supply	2	
	9	Supply of goods or supply of services	3	
	9	Negative list	2	
	10	Tax Liability on composite supplies	2	
	11	Tax Liability on mixed supplies	1	
III	Taxable Supply		15	22
	12	List of exempt goods under GST	2	
	13	List of exempt services under GST	4	
	14	Time of supply of goods	2	
	15	Time of supply of services	2	
	16	Place of supply of goods and services	3	
	17	Determination of value of Taxable supply	2	
IV	Composition Levy		9	14
	18	Eligibility for composition scheme	2	
	19	Ineligibility for composition scheme	2	
	20	Intimation of opting for composition levy	1	
	21	Conditions and restriction for composition levy	2	
	22	Withdrawal and denial of composition scheme	2	
V	Open Ended Module		12	
	23	Practical problems on determining value of supply		
	24	Electronic Commerce Operator		
	25	TDS and TCS under GST		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Shivakumar Upavasi (2021), GST FOR BEGINNERS : FOUNDATIONS FOR GST
2. <https://boslive.icai.org>

ADDITIONAL READINGS

1. Sonal G Singh ,Understanding GST, Cyber-tech publications, New Delhi
2. M M Surg , Goods and Services tax (GST) in India: Background, Present structure and Future changes, New Century Publications, New Delhi.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	1	-	-	-	-	-	-	-
CO 2	-	-	2	-	-	-	2	-	-
CO 3	-	-	-	-	-	-	3	-	-
CO 4	-	1	-	-	-	-	-	-	3
CO 5	3	-	-	-	-	-	-	2	3
CO 6	-	-	-	-	-	-	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar (10%)
- Internal Exam (10%)
- Assignments (10%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	GST COMPLIANCE				
Type of Course	Vocational Minor				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic economics course of level 0 – 99				
Course Summary	This course explores principles of GST compliance, provides proficiency in filing GST returns in time and make the students updated on recent developments and amendments in GST laws and regulations that may impact compliance requirements.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive L	Knowledge Ca	Evaluation Tools used
CO1	Understand the fundamental concepts and principles of GST compliance, including return filing, input tax credit, and anti-profiteering measures.	R	F	Instructor-created exams / Quiz
CO2	Gain proficiency in filing various GST returns accurately and within the stipulated timelines, including GSTR-1, GSTR-3B, and annual returns.	U	C	Seminar Presentation / Group Discussion
CO3	Develop skills to identify and mitigate compliance risks associated with GST, including penalties for non-compliance.	Ap	P	Seminar Presentation / Group Discussion
CO4	Explore strategies and best practices for ensuring GST compliance in different business scenarios, including managing cross-border transactions and GST audits.	Ap	C	Seminar Presentation / Group Discussion
CO5	Analyze case studies and real-life examples to understand practical challenges and solutions in GST compliance.	An	P	Writing assignments
CO6	Stay updated on recent developments and amendments in GST laws and regulations that may impact compliance requirements.	C	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to GST Compliance and Registration Procedures		14	25
	1	GST vs the Current Indirect Tax Structure	2	
	2	Key GST Compliance	1	
	3	Criteria for GST registration.	3	
	4	Procedure for GST registration.	4	
	5	Voluntary registration vs. mandatory registration.	2	
	6	Exemption from GST Registration	2	
II	Books of Accounts		15	10
	7	Maintenance of Books of Accounts:	2	
	8	Who must maintain accounts under GST?	2	
	9	The records must be maintained under GST	2	
	10	The accounts maintained under GST	3	
	11	Accounting entries under GST	2	
	12	Electronic Cash and Credit Ledger	2	
	13	Period for Retention of Accounts under GST	1	
14	Consequences of Not Maintaining Proper Records	1		
III	Issuing GST Invoices and filing of GST Returns		11	20
	15	The mandatory fields a GST Invoice - Types of invoices- Bill of supply- Aggregate invoice-Reverse charge invoice-Debit and credit note	4	
	16	GST Returns - How and When to File Them-	2	
	17	Types of GST returns (GSTR-1, GSTR-3B, GSTR-9, etc.). What is GSTIN?	3	
	18	Common errors and challenges in return filing	2	
IV	Input tax credit and other compliance		8	15
	19	ITC - conditions- Items not allowed for ITC	2	
	20	GST Compliance Audits-	3	
	21	Compliance with GST Council Notifications:	2	
	22	Consequences of Non-Compliance	1	
V	Open Ended Module		12	
		Practical problem highlights the importance of having accurate GSTINs and the challenges businesses may face if there are discrepancies or errors in their GST registration details.		
		Latest budget updates on ITC		
		Practical problem illustrates the importance of adhering to the conditions for claiming ITC and being aware of the items for which ITC is not allowed to avoid financial implications and compliance issues.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers

only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Agarwala, D., Banka, K. V., & Saraf, A. (2022). *Practical Guide to GST Compliances*. Taxmann.
2. <https://cleartax.in/s/gst-payment-issues-complaint>

ADDITIONAL READINGS

1. Government of India. (n.d.). Criteria for GST Registration. GST Council. Retrieved from <https://www.gst.gov.in/> (Module II)
2. Central Board of Indirect Taxes and Customs. (n.d.). Procedure for GST Registration. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
3. Ministry of Finance, Government of India. (n.d.). Types of Invoices Under GST. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
4. Central Board of Indirect Taxes and Customs. (n.d.). How to File GST Returns: Step-by-Step Guide. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	2	1	-	-	-	-	-	-	-
CO 2	-	-	2	-	-	-	2	-	-
CO 3	-	-	-	-	-	-	3	-	-
CO 4	-	1	-	-	-	-	-	-	3
CO 5	3	-	-	-	-	-	-	2	3
CO 6	-	-	-	-	-	-	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar (10%)
- Internal Exam (10%)
- Assignments (10%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	GST AUDIT AND INVESTIGATION TECHNIQUES				
Type of Course	Vocational Minor				
Semester	III				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-		60
Pre-requisites	Foundation course on GST of level 100 – 199				
Course Summary	The objective of this paper is to understand the provisions of the GST law, including the correctness of the tax returns filed, payment of tax, and compliance with other provisions of the law and to know different techniques of GST auditing				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the fundamental concepts and principles of GST auditing	R	F	Instructor-created exams / Quiz
CO2	The program's mission is to broaden the horizon of the learners with a deeper understanding of the GST law and its e filing in the new digital environment and equip them with a new set of tools to help them digitally create and file GST returns.	U	C	Seminar Presentation / Group Discussion
CO3	Develop a detailed understanding in the students of law and practice of Goods and Services Tax and the application of its provisions.	Ap	P	Seminar Presentation / Group Discussion
CO4	Develop a detailed understanding in the students of documents, records, books of accounts and tax returns, and the requirements for the payment of Goods and Services Tax using computer hardware and software packages.	Ap	C	Seminar Presentation / Group Discussion
CO5	Analyze case studies and real-life examples to understand practical challenges and solutions in GST compliance.	An	P	Writing assignments
CO6	Stay updated on recent developments and amendments in GST laws and regulations that may impact compliance requirements.	C	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Purpose and Principles of audit		13	25
	1	Definition of Audit	2	
	2	Types of Audits in GST	1	
	3	General provisions relating to determination of tax	3	
	4	Levy of late fee	4	
	5	Aims and objectives of Audit	2	
	6	Principles of audit	1	
II	Different Steps of Audit		15	10
	7	Selection for audit	2	
	8	Administrative / procedural arrangements for risk-based selection of auditees:	2	
	9	Assignment & team formation for audit:	2	
	10	Commencement of Audit	3	
	11	Draft Audit Report and approval thereof	2	
	12	Knowledge of Form GST REG-06, GSTR1, GSTR2A, GSTR2B, GSTR3B, Form GST CMP – 08,	2	
	13	Form GST PMT –06 Payment Challan, DRC03,	1	
14	Verification of input tax credit system from portal vis a vis books of accounts and its adjustments	1		
III	GST Tax Accounting		10	20
	15	Final Audit Report	2	
	16	Thematic Audit	2	
	17	Administrative arrangement for conduct of Thematic audits.	2	
	18	Multi-locational Co-Audit	2	
	19	Administrative arrangement for Selection of Multi-location Co-Audits	2	
IV	Training and Capacity Building		7	15
	20	Building knowledge on financial accounting	2	
	21	Audit in GST with reference to financial accounting	3	
	22	Cash Flow - The third important financial statement	2	
V	Open Ended Module		12	
		Training: Relevant offline tools on GST portal.		
		Verification of input tax credit system from portal vis a vis books of accounts and its adjustments.		
		Every candidate will be assigned a project topic and project mentor/ guide in order to get the practical exposure about GST law and practice in India.		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split

between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Ahuja, Girish and Gupta, Ravi. Systematic Approach to GST. Wolters Kluwer
2. Sekhon, Shailinder., GST....Unlocking the complexities of Indirect taxes. Published by Sumirat publication and Bookman, New delhi.
3. Bansal, K. M., GST & Customs Law, Taxman Publication.
4. Mehrotra H.C. and Agarwal, V.P. Goods and Services Tax and Customs. Sahitya BhawanPublications.
5. Saha, R.G. Shah, Divyesh and Devi, Usha. Goods and Service Tax. HPH 6. Datey, V. S. All about GST, A Complete Guide to Model GST Law. Taxman Publications

ADDITIONAL READINGS

1. Government of India. (n.d.). Criteria for GST Registration. GST Council. Retrieved from <https://www.gst.gov.in/> (Module II)
2. Central Board of Indirect Taxes and Customs. (n.d.). Procedure for GST Registration. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
3. Ministry of Finance, Government of India. (n.d.). Types of Invoices Under GST. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
4. Central Board of Indirect Taxes and Customs. (n.d.). How to File GST Returns: Step-by-Step Guide. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	2	1	-	-	-	-	-	-	-
CO 2	-	-	2	-	-	-	2	-	-
CO 3	-	-	-	-	-	-	3	-	-
CO 4	-	1	-	-	-	-	-	-	3
CO 5	3	-	-	-	-	-	-	2	3
CO 6	-	-	-	-	-	-	-	-	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar (10%)
- Internal Exam (10%)
- Assignments (10%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ADVANCED TOPICS IN GST: ANTI-EVASION MEASURES AND CASE STUDIES				
Type of Course	Vocational Minor				
Semester	VIII				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Course on GST of level 200 – 299				
Course Summary	This course provides a comprehensive knowledge on tax evasion, offences, penalties, appeals and revisions and also discusses the case studies related to tax evasion				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the concept of Tax evasion of GST, various situations evasion of GST and anti-evasion measures under GST regime	R	F	Instructor-created exams / Quiz
CO2	Gain knowledge in Offences and Penalties under GST Laws, Punishment for offences and ethics under GST	U	C	Seminar Presentation / Group Discussion
CO3	Understand appeals to appellate authority, tribunal and Powers of revision authority	U	P	Seminar Presentation / Group Discussion
CO4	Analyze the Problem of tax evasion in India	An	P	Seminar Presentation / Group Discussion
CO5	Explore the Lags leading to tax frauds	An	P	Writing assignments
CO6	Stay updated on tax evasion cases in India and related issues	C	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction		10	15
	1	Meaning of Tax evasion	2	
	2	Identification of tax evasion	2	
	3	Tax evasion in various situations	3	
	4	Anti-evasion measures under GST regime	3	
II	Offences and Penalties under GST Laws		15	22
	5	Offences under GST Laws	2	
	6	Penalties for certain offences	3	
	7	Punishment for offences	3	
	8	Power to impose and wave penalty	2	
	9	Compounding of offences	2	
	10	Ethics under GST	3	
III	Appeals and Revisions		12	17
	11	Appeals to appellate authority	2	
	12	Powers of revision authority	2	
	13	Appellate tribunal under GST laws	2	
	14	Appeal to appellate tribunal	2	
	15	Appeal to Supreme court and High court	2	
	16	Appeal not to be filed in certain cases	2	
IV	Case Studies		11	16
	17	Problem of tax evasion in India	2	
	18	Case studies related to tax evasion	3	
	19	Lags leading to tax frauds	2	
	20	Role of Professionals in avoiding prosecution	1	
	21	Role of Professionals in avoiding payment of Penalties	1	
	22	E- invoicing and reducing tax evasion	2	
V	Open Ended Module		12	
	23	Advance Ruling		
	24	Discussion on tax evasion cases in India and related issues		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Shivakumar Upavasi , GST FOR BEGINNERS : FOUNDATIONS FOR GST Paperback – 23 July 2021
2. Sumit Agarwal, Shashwat Alok, Shiv Dixit & Tejaswi Velayudhan , Impact of the GST on Corporate Tax Evasion: Evidence from Indian Tax Records, March 8, 2022, Indian Statistical Institute, Delhi
3. https://icmai.in/TaxationPortal/upload/IDT/Article_GST/210.pdf
4. <https://fpibengaluru.karnataka.gov.in/storage/pdf-files/Intern%20Reports>

ADDITIONAL READINGS

1. Government of India. (n.d.). Criteria for GST Registration. GST Council. Retrieved from <https://www.gst.gov.in/> (Module II)
2. Central Board of Indirect Taxes and Customs. (n.d.). Procedure for GST Registration. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
3. Ministry of Finance, Government of India. (n.d.). Types of Invoices Under GST. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>
4. Central Board of Indirect Taxes and Customs. (n.d.). How to File GST Returns: Step-by-Step Guide. Goods & Services Tax Network. Retrieved from <https://www.gstn.org/>

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	2	1	-	-	-	-	-	-	-
CO 2	3	-	2	-	-	-	-	-	-
CO 3	3	2	-	-	-	-	-	-	-
CO 4	-	1	-	-	-	-	-	3	2
CO 5	-	-	2	-	-	-	-	2	3
CO 6	-	-	-	-	-	-	-	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar (10%)
- Internal Exam (10%)
- Assignments (10%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	FUNDAMENTALS OF DATA SCIENCE IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic economics course of 0 – 99 level				
Course Summary	This course focuses on various aspects of income tax calculations, basic components of income, tax deductions, tax exemptions and tax regimes.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	To understand the relevance of data science in economics.	U	C	Instructor-created exams / Practical Assignment
CO2	To understand the basic elements of how data is collected, managed and stored for data.	U	F	Writing assignments / Quiz
CO3	To analyze data with a variety of statistical methods and models	An	P	Observation of Practical Skills / Group Discussion
CO4	To analyze data using various visualization techniques.	An	P	Observation of Practical Skills / Home Assignments
CO5	Apply contemporary models, such as machine learning, AI etc to solve economic problems	Ap	P	Practical Skills / Instructor-created exams
CO6	To develop an analytical, interdisciplinary understanding of concepts, theories and associate them with real life situations	C	M	Practical Assignment Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Mark
I	INTRODUCTION TO DATA SCIENCE		10	15
	1	Definition, Big Data and Data Science, Datafication.	2	
	2	Data Science Profile, Meta-Definition	2	
	3	Statistical Inference	2	
	4	Populations and Samples	1	
	5	Philosophy of Exploratory Data Analysis	1	
	6	The Data Science Process	2	
II	MATHEMATICAL TOOLS		16	23
	7	Matrices to represent relations between data	3	
	8	linear algebraic operations on matrices	3	
	9	Descriptive Statistics	4	
	10	Probability	3	
	11	Correlation Analysis.	3	
III	DATA MUNGING		10	15
	12	Properties of Data	2	
	13	Languages for Data Science	2	
	14	Collecting Data	2	
	15	Cleaning Data	2	
	16	Crowdsourcing	2	
IV	STATISTICAL ANALYSIS		12	17
	17	Sampling from Distributions	2	
	18	Statistical Distributions	2	
	19	Statistical Significance	2	
	20	Permutation Tests P-values	2	
	21	P-values	2	
	22	Visualizing Data	2	
V	Open Ended Module		12	
		Linear Regression Better Regression Models, Regression as Parameter Fitting		
		Better Regression Models		
		Regression as Parameter Fitting		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Steven S. Skiena, "The Data Science Design Manual", Springer 2017.
2. Rachel Schutt & O'neil, "Doing Data Science", Straight Talk from The Frontline O'REILLY, ISBN:978-1-449-35865-5, 1st edition, October 2013.
3. Joel Grus," Data Science from Scratch" First Edition, April 2015 2. Gareth James, Daniela Witten, Trevor Hatie, RoberstTibhirani , "An Introduction to Statistical Learning-with Applications in R", 2013

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	3	-	-	-	-	-	-	-	-
CO 3	-	-	-	3	-	-	2	-	-
CO 4	-	-	-	2	-	-	3	-	-
CO 5	-	-	-	2	-	-	2	3	-
CO 6	-	-	-	2	-	-	2	3	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments
- Final Exam

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓		✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6		✓	✓	

Programme	B.A. Economics				
Course Title	CROSS SECTION DATA ANALYSIS IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic economics course of 0 – 99 level				
Course Summary	This course aims to equip students with the economic cross-section data analysis				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will understand the principles underlying regression analysis, including the simple regression model, multiple regression analysis, and the assumptions of OLS estimation.	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will apply econometric techniques to estimate causal effects, conduct regression analysis, and interpret the results using statistical software.	An	C	Instructor-created exams /Practical Assignment
CO3	Students will analyze the strengths and limitations of different econometric models, assess the validity of causal claims, and identify potential sources of bias or error in regression analysis.	Ap	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Students will evaluate the reliability of regression results, critically assess empirical research studies, and determine the effectiveness of econometric techniques in addressing economic questions.	C	C	Instructor-created exams / Home Assignments
CO5	Students will design and implement regression models to analyze specific economic phenomena, generate new research questions, and propose innovative econometric approaches to address them.	C	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Economic questions and data		6	9
	1	Economic questions	2	
	2	Causal effects idealized experiments -estimation of causal effects- forecasting and causality	2	
	3	Structure of data-Experimental versus observational data-Cross-section data- Time series data- Pooled cross section data- Panel or longitudinal data	2	
II	The simple regression model		16	23
	4	Definition of the Simple Regression Model	1	
	5	Deriving the Ordinary Least Squares Estimates	2	
	6	Properties of OLS on Any Sample of Data-Fitted Values and Residuals-Algebraic Properties of OLS Statistics	3	
	7	Goodness-of-Fit	2	
	8	Units of Measurement and Functional Form-The Effects of Changing Units of Measurement on OLS Statistics-Incorporating Nonlinearities in Simple Regression	3	
	9	Expected Values and Variances of the OLS Estimators-	2	
	10	Regression through the Origin and Regression on a Constant	1	
III	Multiple Regression Analysis: Estimation		16	23
	11	The Model with Two Independent Variables -The Model with k Independent Variables	2	
	12	Obtaining the OLS Estimates-Interpreting the OLS Regression Equation- On the Meaning of “Holding Other Factors Fixed” in Multiple Regression- OLS Fitted Values and Residuals -A “Partiallying Out” Interpretation of Multiple Regression	4	
	13	Comparison of Simple and Multiple Regression Estimates- Goodness-of-Fit-Regression through origin	3	
	14	The Expected Value of the OLS Estimators- including irrelevant variable-omitted variable bias	2	
	15	The Variance of the OLS Estimators- The Components of the OLS Variances. Multicollinearity- Variances in Misspecified Models- Estimating Standard Errors of the OLS Estimators	3	
	16	Efficiency of OLS: The Gauss-Markov Theorem	2	
IV	Multiple Regression Analysis: Inference		10	15
	17	Sampling Distributions of the OLS Estimators	2	
	18	Testing Hypotheses about a Single Population Parameter: The t Test	2	
	19	Confidence Intervals	1	
	20	Testing Hypotheses about a Single Linear Combination of the Parameters	2	
	21	Testing Multiple Linear Restrictions: The F Test	2	

	22	Reporting Regression Results	1	
V	Open Ended Module		12	
	1	Data collection		
	2	Analysis of data using software like SPSS		
	3	Interpret the result		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Wooldridge, Jeffrey M. "Introductory econometrics, Wooldridge." (Sixth edn) (Module 1,2,3,&4).
2. Stock, James H., and Mark W. Watson. *Introduction to econometrics*. Pearson, 2020. (Module 1)

ADDITIONAL READINGS

1. Gujarati, Damodar. *Econometrics by example*. Bloomsbury Publishing, 2014.
2. Gujarati, Damodar N., and Dawn C. Porter. *Basic econometrics*. McGraw-hill, 2009.
3. Dougherty, Christopher. *Introduction to econometrics*. Oxford university press, USA, 2011.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	2	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	-	-
CO 4	-	2	-	3	1	2	-	2	3
CO 5	-	3	1	3	1	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	TIME SERIES DATA ANALYSIS IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Econometrics course of 100 – 199				
Course Summary	This course aims to equip students with the economic data analysis				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will understand the principles underlying regression analysis and the properties of OLS estimation.	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will apply econometric techniques to estimate causal effects, conduct regression analysis, and interpret the results using statistical software.	An	C	Instructor-created exams /Practical Assignment
CO3	Students will analyse the strengths and limitations of different econometric models, assess the validity of causal claims, and identify potential sources of bias or error in regression analysis.	Ap	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Students will evaluate the reliability of regression results, critically assess empirical research studies, and determine the effectiveness of econometric techniques in addressing economic questions.	C	C	Instructor-created exams / Home Assignments
CO5	Students will design and implement regression models to analyse specific economic phenomena, generate new research questions, and propose innovative econometric approaches to address them.	C	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Economic data		5	8
	1	The structure of Economic Data	1	
	2	Cross – Sectional Data	1	
	3	Time Series Data	1	
	4	Pooled Cross Sections	1	
	5	Panel or Longitudinal Data	1	
II	Basic Regression Analysis with Time Series Data		16	23
	6	The Nature of Time Series Data	2	
	7	Examples of Time Series Regression Models	3	
	8	Finite Sample Properties of OLS under Classical Assumptions	3	
	9	Functional Form, Dummy Variables, and Index Numbers	4	
	10	Trends and Seasonality	4	
III	Further Issues in Using OLS with Time Series Data		16	23
	11	Stationary and Weakly Dependent Time Series	3	
	12	Asymptotic Properties of OLS	4	
	13	Using Highly Persistent Time Series in Regression Analysis	4	
	14	Dynamically Complete Models and the Absence of Serial Correlation	2	
	15	The Homoskedasticity Assumption for Time Series Models	3	
IV	Serial Correlation and Heteroskedasticity in Time Series Regressions		11	16
	16	Properties of OLS with Serially Correlated Errors	1	
	17	Serial Correlation in the Presence of Lagged Dependents Variables	1	
	18	Testing for serial correlation	2	
	19	Correcting for Serial Correlation with Strictly Exogenous Regressors	2	
	20	Differencing and Serial Correlation	2	
	21	Serial Correlation – Robust Inference after OLS	1	
	22	Heteroskedasticity in Time Series Regressions	2	
V	Open Ended Module		12	
	1	Data collection		
	2	Analysis of data using software like SPSS		
	3	Interpret the result		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Wooldridge, Jeffrey M.” Econometrics.” (2011) (Module1,2,3,&4).

ADDITIONAL READINGS

1. Gujarati, Damodar N., and Sangeetha. *Basic econometrics*. McGraw-hill, (Fourth Edition) 2007.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	2	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	-	-
CO 4	-	2	-	3	1	2	-	2	3
CO 5	-	3	1	3	1	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	PANEL DATA ANALYSIS IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	VIII				
Academic Level	300 – 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	200 – 299 level course on Data Analysis in Economics				
Course Summary	This course aims to equip students with the economic data analysis				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will understand the basics of panel data	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will understand the advantages and disadvantages of panel data	U	C	Instructor-created exams /Practical Assignment
CO3	Students will learn econometric techniques for panel data	C	C	Instructor-created exams /Seminar Presentation / Group Discussion
CO4	Students will study applications in various fields of economics	C	C	Instructor-created exams / Home Assignments
CO5	Students will apply these techniques in appropriate data settings	Ap	C	Writing assignments/ Seminar/ presentation/ Group activities

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	INTRODUCTION TO PANEL DATA		8	12
	1	Panel data: Meaning	1	
	2	Panel data: Some examples	2	
	3	Panel data: Benefits and limitations	2	
	4	Panel data: Brief History	1	
	5	Sources and types of panel data	2	
II	FUNDAMENTALS OF PANEL DATA: BASIC TERMINOLOGIES		12	17
	6	Balanced and Unbalanced panel data	1	
	7	Compact Panel	1	
	8	Attrition	1	
	9	Long Panel	1	
	10	Short panel	1	
	11	Homogeneous panel data models	2	
	12	Heterogeneous panel data models	2	
	13	Dynamic panel data model	2	
	14	Stationarity	1	
III	TYPES OF PANEL ANALYTIC MODELS: BASIC		15	22
	15	Fixed effects model: Meaning and Examples	4	
	16	Random effects model: Meaning and Examples	4	
IV	SIMPLE PANEL DATA METHODS		13	19
	17	Policy analysis with Pooled Cross Sections	2	
	18	Two period panel data analysis	2	
	19	Policy analysis with two period panel data analysis	2	
	20	Differencing with more than two time periods	2	
	21	Advanced panel data methods	2	
	22	Test of hypothesis with panel data	3	
V	Open ended module		12	
	1	Data collection		
	2	Analysis of data using software like SPSS		
	3	Interpret the result		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Badi.H.Baltagi, Econometric analysis of Panel data , Springer,2021
2. Manual Arellano, Panel Data Econometrics,OOxford University Press,2003

ADDITIONAL READINGS

1. Donggyu Sul, Panel Data Econometrics, Taylor & Francis LTD.
2. Gujarati, Damodar. *Econometrics by example*. Bloomsbury Publishing, 2014.
3. Gujarati, Damodar N., and Dawn C. Porter. *Basic econometrics*. McGraw-hill, 2009.
4. Dougherty, Christopher. *Introduction to econometrics*. Oxford university press, USA, 2011.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	2	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	-	-
CO 4	-	2	-	3	1	2	-	2	3
CO 5	-	3	1	3	1	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	APPLIED ECONOMETRICS AND DATA MINING				
Type of Course	Vocational Minor				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic courses in Economics and Statistics of level 0 – 99 level				
Course Summary	This course provides an opportunity for students to acquire knowledge about the applications of econometrics.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will Understand basic features of applied econometrics like methodology, concept and scope	U	C	Instructor-created exams / Quiz/ Assignments
CO2	Students will apply Econometric techniques to analyse consumer behaviour, including demand estimation, elasticity measurement, and Engel curve and demand forecasting	Ap	C	Instructor-created exams /Practical Assignment/ Group Discussion
CO3	Students will analyse the use of Applied econometrics techniques in production functions	An	C	Instructor-created exams / Practical Assignment
CO4	Students will demonstrate knowledge of fundamental concepts in data mining, including data preprocessing, and its working and acquire knowledge about different software in data mining	F	C	Instructor-created exams / Home Assignments/Seminar presentations
CO5	Students will understand the ethical and legal issues associated with data mining, including privacy concerns, data security, bias, and fairness.	C	P	Writing assignments/ Seminar/ presentation/ Group activities
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)				
# - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

Module	Unit	Content	Hrs	Marks
I	Introduction		8	12
	1	Nature, Meaning and Scope of Applied Econometrics	2	
	2	Theoretical vs. Applied Econometrics	1	
	3	Concept of Econometrics Model	1	
	4	Methodology of Applied Econometrics	2	
	5	Properties of a good Econometric model	1	
	6	Limitations of a good Econometric model	1	
II	Consumer Behaviour		10	14
	7	Specification and estimation of demand functions	3	
	8	Price elasticity estimation	3	
	9	Engel curve.	2	
	10	Forecasting and decision making	2	
III	Producer's behaviour		15	22
	11	Estimation of production function	3	
	12	Cobb Douglas production function	3	
	13	CES production function	3	
	14	Cost function analysis	3	
	15	Measurement of partial and total factor productivity.	3	
IV	Data mining		15	22
	16	Data mining- concept and definition and objectives	1	
	17	Data mining- objectives	1	
	18	Benefits of data mining	1	
	19	Data mining process and its working	4	
	20	Different software's in data mining	3	
	21	Application of data mining in Economics	2	
	22	Big data analytics	3	
V	Open ended module		12	
	1	Hands on experience in data analysis		
	2	Practical sessions using statistical software's		
	3	Interpretation and presentations of result		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Raw and Miller. R.L., Applied Econometrics, PHI, Delhi, 1959.
2. "Data Mining: Techniques, Concepts, and Applications" by Dunham, K.Srinivasa and K. Rajendra Prasad

ADDITIONAL READINGS

1. Gujarati, Damodar. *Econometrics by example*. Bloomsbury Publishing, 2014.
2. Gujarati, Damodar N., and Dawn C. Porter. *Basic econometrics*. McGraw-hill, 2009.
3. S. Sumathi and S. N. Sivanandam "Data Mining: Techniques and Applications" by
4. A.Colin Cameron and Pravin K. Trivedi "Microeconometrics: Methods and Applications"
5. Koutsoyiannis, A. (1977) *Theory of Econometrics An Introductory Exposition Econometric Methods* Macmillan

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	2	1
CO 4	3	2	-	3	1	3	-	2	3
CO 5	-	3	1	3	1	-	-	2	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5	✓	✓		

Programme	B.A. Economics				
Course Title	BIG DATA APPLICATIONS IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Basic courses on Economics and Mathematics of 0 – 99 level				
Course Summary	The students will be able to identify the role of big data in economic theory, using big data for prediction purpose and make capable for helping private and public policies				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the characteristics and sources of data	U	F	Instructor-created exams / Quiz
CO2	Analyze different Motivating applications	Ap	C	Practical Assignment / Observation of Practical Skills
CO3	Evaluate Architectures for big data collection	E	P	Seminar Presentation / Group Discussion
CO4	Apply Big Data for Prediction and Public Policy	Ap	P	Instructor-created exams / Home Assignments
CO5	Create programs for big data analytics	C	M	Running programs
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	M	Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)
Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	The Role of Economic Theory in big data		5	8
	1	Characteristics of Big data.	1	
	2	The need for Analytics and Understanding Analytics: Impact of analytics on business; Being analytically competitive; Models and algorithms in Analytics; The Analytics Methodology	2	

	3	Advantages of big data in the economic research and policymaking	1	
	4	Challenges and risks in big data	1	
II	Major economic data sources		15	22
	5	Sources of big data - National and International	2	
	6	India specific data sources- National Sample Survey Organization (NSSO), Central Statistical Organization (CSO)	3	
	7	Reserve Bank of India (RBI)- Handbook of Statistics on Indian Economy- SEBI Handbook of Statistics	3	
	8	Global data sources- UN Data-Monthly Bulletin of Statistics (MBS),SDG Indicators, United Nations Conference on Trade and Development (UNCTAD), World Development Indicators (WDI), IMF Databases- The World Bank Data Catalog- Federal Reserve Economic Database (FRED)	3	
	9	Motivating applications: web scraping, social media, Google.	2	
	10	Real time data (Social media and the labour market)	2	
III	Using Big Data to Advanced Economic Theory		14	20
	11	Tool and Tech Landscape: A review of technology used in data storage, data processing, and data science; Popular tools used in Data Science and when to use each	3	
	12	Using Big Data for Prediction and Public Policy	2	
	13	Architectures for big data collection, analysis, and storage.	3	
	14	Using micro data to answer macroeconomic questions	3	
	15	Finance and high frequency trading	3	
IV	Machine learning methods		14	20
	16	Linear Regression Models and their applications	2	
	17	Logistics Regression Models and their applications	2	
	18	Time Series Forecasting	2	
	19	k-nearest-neighbors, classification and regression trees, random forests.	2	
	20	An overview of neural networks and deep learning: Images, sounds, text, as sources of information.	2	
	21	Text mining: natural language processing, latent Dirichlet allocation, sentiment analysis.	2	
	22	Big Data Analytics with R.	2	
V	Open Ended Module		12	
		NFHS data extraction techniques		
		NSSO data extraction techniques		
		Data pulling/extracting exercises, data cleaning exercises, data treatment exercises		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. “Big Data: A Revolution That Will Transform How We Live, Work, and Think” by Viktor Mayer-Schönberger and Kenneth Cukier, Houghton Mifflin Harcourt, 2013
2. “Machine-learning Techniques in Economics: New Tools for Predicting Economic Growth” by Atin Basuchoudhary, James T. Bang, and Tinni Sen, Springer.
3. “Data Science for Economics and Finance: Methodologies and Applications” edited by Sergio Consoli, Diego Reforgiato Recupero, and Michaela Saisana, Springer.
4. Antenucci, Dolan, et al. (2014) “Using social media to measure labor market flows.” Working paper no. w20010. National Bureau of Economic Research.
5. Athey, S. (2018). “The impact of machine learning on economics”, in The Economics of Artificial Intelligence: An Agenda. University of Chicago Press.
6. BDS Taddy, M. (2019) Business Data Science: Combining Machine Learning and Economics to Optimize, Automate, and Accelerate Business Decisions. McGraw Hill.
7. Choi, Hyunyoung and Hal Varian (2009). “Predicting the present using Google Trends” Working paper.
8. Dave Donaldson and Adam Storeygard, The View from Above: Applications of Satellite Data in Economics, The Journal of Economic Perspectives, Fall 2016, Vol. 30, No. 4 (Fall 2016), pp. 171-198, Published by: American Economic Association.
9. Einav, Liran, and Jonathan D. Levin. (2013) “The data revolution and economic analysis.” Working paper no. w19035. National Bureau of Economic Research.
10. Hal R. Varian, Big Data: New Tricks for Econometrics, The Journal of Economic Perspectives , Spring 2014, Vol. 28, No. 2 (Spring 2014), pp. 3-27, American Economic Association
11. Jay Liebowitz, “Big Data and Business Analytics” Auerbach Publications, CRC press (2013)
12. Liran Einav and Jonathan Levin, The Data Revolution and Economic Analysis, Innovation Policy and the Economy , Vol. 14, No. 1 (January 2014), pp. 1-24, The University of Chicago Press on behalf of the The National Bureau of Economic Research
13. Michael Berthold, David J. Hand, "Intelligent Data Analysis", Springer, 2007.
14. Seema Acharya, Subhasini Chellappan, "Big Data Analytics" Wiley 2015.
15. Sendhil Mullainathan and Jann Spiess, Machine Learning: An Applied Econometric Approach, The Journal of Economic Perspectives, Spring 2017, Vol. 31, No. 2 (Spring 2017), pp. 87-106, American Economic Association
16. Stephen Hawkins , Brief Answers to the Big Questions (Selected Chapters)
17. Yuval Harari, 21 Lessons for the 21st Century

MAPPING OF COS WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	3	2	2	3	2	3
CO 2	1	1	1	2	2	2	3	2	3
CO 3	1	1	1	2	2	2	3	2	3
CO 4	1	1	2	2	2	2	3	3	3
CO 5	2	2	1	3	2	2	3	3	3
CO 6	1	1	2	2	2	2	3	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ECONOMIC DATA VISUALISATION AND STORYTELLING				
Type of Course	Vocational Minor				
Semester	III				
Academic Level	200 – 299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economic Data Analysis course of 100 – 199 level				
Course Summary	Students will learn how to extract insights from economic data, create compelling visualizations, and craft engaging narratives, through a hands-on approach,				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will demonstrate an understanding of the principles of data storytelling and its relevance in economic contexts.	U	C	Written reflections on the importance of data narratives in economic analysis.
CO2	Students will analyze economic data narratives to extract insights and patterns.	An	C	Case studies or real-world examples where students critically evaluate data stories and identify underlying economic implications.
CO3	Students will be able to create effective time series visualizations using appropriate tools (e.g., Excel, Python, R).	Ap	C	A portfolio of time series graphs showcasing economic trends and patterns.
CO4	Students will design comprehensive data narratives that integrate visualizations and storytelling	C	C	Final presentations or reports where students develop and present their own data stories on economic topics
CO5	Students will develop original data-driven narratives related to economic trends and patterns.	C	C	Assessment of individual or group projects showcasing data narratives and visual designs.
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Data Story Exploration & Explanation		8	12
	1	Narratives in Numbers (Understanding how to find, collect, and analyze economic data; Spotting stories within numerical data; Developing a “data mindset” for better decision-making; Crafting compelling narratives using data)	3	
	2	Effective Infographics (Exploring various ways to depict economic data visually; Choosing the right chart or infographic to convey clear and powerful messages; Revealing new insights through data visualization; Avoiding potential pitfalls and deceptive visual representations)	3	
	3	Storytelling Techniques (Learning the art of storytelling with economic data; Understanding the components of data stories: narrative, data, and visuals; Crafting engaging narratives around complex economic concepts; Presenting data effectively and visually appealing)	2	
II	Visualizing Time Series Data		15	22
	4	Line Plots and Time Series Graphs (Understanding the basics of line plots and their suitability for visualizing time series data; Creating line graphs to represent economic trends over time; Highlighting seasonality, cyclical patterns, and long-term changes using time series graphs)	1	
	5	Seasonal Subseries Plots (Exploring seasonal variations in economic data; Constructing subseries plots to visualize patterns within specific seasons (e.g., monthly or quarterly); Identifying recurring patterns and anomalies related to seasons)	2	
	6	Autocorrelation Plots (Analyzing autocorrelation in time series data; Creating autocorrelation plots to assess the relationship between observations at different lags; Detecting periodicity and potential predictive patterns)	3	
	7	Histograms for Time Series Data (Using histograms to understand the distribution of economic variables over time; Identifying central tendencies, variability, and potential outliers; Comparing the distribution of economic indicators across different time periods)	1	
	8	Interactive Visualizations for Dynamic Data (Building interactive dashboards that allow users to explore economic data over time; Incorporating tooltips, sliders, and other interactive elements)	3	
	9	Identifying Anomalies and Outliers (Detecting sudden changes, spikes, or dips in economic time series; Visualizing anomalies using scatter plots, box plots, or	2	

		threshold-based techniques; Understanding the impact of outliers on economic analysis)		
	10	Comparing Multiple Time Series (Visualizing economic performance across different sectors, regions, or countries; Overlaying multiple time series on a single graph for comparative analysis; Highlighting relative growth rates, trends, and disparities)	1	
III	Data Story Narrative		15	22
	11	Narrative Structure for Data Stories (Understanding the fundamental elements of storytelling (e.g., protagonist, complication, resolution); Applying narrative structures (e.g., Aristotle’s Tragedy Structure, Campbell’s Hero’s Journey) to data stories; Crafting a compelling narrative arc for economic data insights)	2	
	12	Setting the Scene: Current Situation (Introducing the context and background of the economic problem or scenario; Describing the current state of affairs using relevant data points; Creating a hook to engage the audience in the data story)	4	
	13	Insights Leading to the Central Point (Unveiling key insights derived from economic data analysis; Presenting data-driven findings that build up to the central insight; Using visualizations to support and emphasize these insights)	3	
	14	Recommendations and Implications (Proposing actionable recommendations based on the data insights; Discussing the implications of the central insight for decision-makers; Addressing potential challenges or risks associated with the recommendations)	2	
	15	Crafting Engaging Data Narratives (Techniques for making data stories memorable and persuasive. Weaving data points into a coherent and relatable narrative; Balancing quantitative information with qualitative storytelling)	2	
	16	Effective Communication Techniques (Tailoring the data story to different audiences (e.g., executives, policymakers, general public); Choosing the right tone, language, and level of detail; Leveraging storytelling techniques (e.g., anecdotes, metaphors) to enhance understanding and retention)	2	
IV	Data Story Planning & Design		10	14
	17	Narrative Structure for Data Stories (Applying narrative structures (e.g., Aristotle’s Tragedy Structure, Campbell’s Hero’s Journey) to data stories; Crafting a compelling narrative arc for economic data insights)	2	
	18	Setting the Scene: Current Situation (Introducing the context and background of the economic problem or scenario; Describing the current state of affairs using relevant data points; Creating a hook to engage the	2	

		audience in the data story)		
	19	Insights Leading to the Central Point (Unveiling key insights derived from economic data analysis; Presenting data-driven findings that build up to the central insight; Using visualizations to support and emphasize these insights)	1	
	20	Recommendations and Implications (Proposing actionable recommendations based on the data insights; Discussing the implications of the central insight for decision-makers; Addressing potential challenges or risks associated with the recommendations)	2	
	21	Crafting Engaging Data Narratives (Techniques for making data stories memorable and persuasive; Weaving data points into a coherent and relatable narrative; Balancing quantitative information with qualitative storytelling)	2	
	22	Effective Communication Techniques (Tailoring the data story to different audiences (e.g., executives, policymakers, general public); Choosing the right tone, language, and level of detail; Leveraging storytelling techniques (e.g., anecdotes, metaphors) to enhance understanding and retention)	1	
V	Open ended module		12	
	1	Ethical Considerations in Data Visualization (Explore the ethical implications of data visualization in economic contexts; Discuss issues related to bias, misrepresentation, and privacy; Encourage critical thinking about responsible data visualization practices)		
	2	Interactive and Dynamic Visualizations (Dive into creating interactive dashboards and dynamic visualizations; Understand the benefits of interactive elements (e.g., tooltips, filters, animations); Learn how to engage users through interactive data exploration)		
	3	Visualizing Uncertainty and Risk (Address uncertainty in economic data (e.g., confidence intervals, prediction intervals); Visualize risk scenarios using probabilistic methods; Explore techniques for conveying uncertainty in economic forecasts)		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Dykes, B. (2020). Effective Data Storytelling: How to Drive Change with Data, Narrative, and Visuals. John Wiley & Sons.
2. Kirk, A. (2019). Data Visualization: A Handbook for Data-Driven Design (2nd Edition). Sage.

ADDITIONAL READINGS

1. “Data storytelling and visualisation” by The Economist
2. “Data Visualization and Storytelling” by NYU Wagner

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	2	1	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	-	-
CO 4	-	2	-	3	1	2	-	2	3
CO 5	-	3	1	3	1	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

Programme	B.A. Economics				
Course Title	MACHINE LEARNING IN ECONOMICS				
Type of Course	Vocational Minor				
Semester	VIII				
Academic Level	300 - 399				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	4	4	-	-	60
Pre-requisites	Economic Data Analysis course of 200 – 299 level				
Course Summary	This course aims to equip students to explore statistical models, multivariate linear regression, tree-based models, deep learning, and advanced topics like causal inference and ethical considerations in ML for economics				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the Foundations of Statistical Models and Optimization in Economics	U	C	Written exam or concept-based questions
CO2	Analyze Model Diagnostics and Residual Analysis in Multivariate Linear Regression	An	C	Case study or practical assessment involving residual analysis and interpretation of influential observations
CO3	Apply Variable Selection Techniques in Multivariate Linear Regression	Ap	C	Practical assignments involving stepwise regression, regularization methods, and feature importance analysis.
CO4	Create Interpretable Machine Learning Models	C	C	Project or assignment where students build and interpret ML models (e.g., using SHAP values or LIME) on economic datasets.
CO5	Develop Ethical AI Practices in Economics	C	P	Research paper or presentation discussing ethical considerations, bias mitigation, and privacy-preserving techniques in ML applications for economics.
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Introduction to Statistical Models and Optimization		5	7
	1	Statistical models	1	
	2	Loss functions	2	
	3	Optimization techniques	2	
II	Review of Multivariate Linear Regression		15	22
	4	Introduction to Multivariate Linear Regression (Overview of linear regression with multiple independent variables; Assumptions and limitations; Interpretation of coefficients)	2	
	5	Matrix Representation and Notation (Representing multiple regression equations using matrices; Matrix algebra for regression; Vector notation for model parameters)	2	
	6	Model Estimation and Inference (Least squares estimation; Hypothesis testing for regression coefficients; Confidence intervals)	3	
	7	Model Diagnostics and Residual Analysis (Checking model assumptions (linearity, homoscedasticity, normality); Residual plots and influential observations; Detecting multicollinearity)	2	
	8	Variable Selection Techniques (Stepwise regression (forward, backward, and hybrid approaches); Regularization methods (Lasso, Ridge); Feature importance and selection criteria)	3	
	9	Interaction Effects and Nonlinear Terms: (Incorporating interaction terms; Polynomial regression; Splines and piecewise linear models)	2	
	10	Applied Examples and Case Studies (Real-world applications of multivariate linear regression in economics; Case studies illustrating practical use and interpretation)	1	
III	Beyond Linear Regression		15	22
	11	Generalized Linear Models (GLMs) (Introduction to GLMs as an extension of linear regression; Different link functions (e.g., logistic, Poisson) for modeling non-normal response variables; Applications in economics (e.g., binary choice models, count data models))	2	
	12	Nonparametric Regression Techniques (Kernel regression and local regression; Smoothing splines; Advantages and limitations of nonparametric approaches)	4	
	13	Tree-Based Models (Decision trees and ensemble methods (e.g., Random Forest, Gradient Boosting); Interpretability and predictive power; Handling missing data and categorical variables)	3	
	14	Support Vector Machines (SVM) (Basics of SVM for classification and regression) Kernel trick and hyperparameter tuning; Economic applications (e.g., credit risk assessment, stock market prediction)) Neural Networks and Deep Learning (Introduction to artificial neural networks (ANNs)); Feedforward architecture, activation functions, and backpropagation.	2	
	15	Deep learning architectures (e.g., CNNs, RNNs) and their relevance in economics)	2	
	16	Model Evaluation and Selection (Cross-validation techniques; Model comparison using metrics (e.g., RMSE, AIC, BIC); Bias-variance trade-off and overfitting)	2	

IV	Advanced Topics in Machine Learning for Economics		13	19
	17	Causal Inference and Econometrics (Counterfactual analysis and causal inference; Propensity score matching and regression discontinuity design; Incorporating machine learning techniques for causal analysis)	2	
	18	Time Series Forecasting (ARIMA (AutoRegressive Integrated Moving Average) models; Exponential smoothing methods; Deep learning for time series prediction (e.g., LSTM networks))	2	
	19	Natural Language Processing (NLP) in Economics (Text mining and sentiment analysis; Topic modeling (e.g., Latent Dirichlet Allocation); Applications in analyzing economic news, research papers, and social media data)	2	
	20	Reinforcement Learning (RL) for Decision-Making (Markov Decision Processes (MDPs) and RL fundamentals; Q-learning, policy gradients, and actor-critic algorithms; Economic applications (e.g., optimal pricing, resource allocation))	2	
	21	Interpretable Machine Learning (SHAP (SHapley Additive exPlanations) values and feature importance; LIME (Local Interpretable Model-agnostic Explanations); Ensuring transparency and accountability in ML models)	2	
	22	Ethical Considerations in ML for Economics (Bias and fairness in ML models; Privacy-preserving techniques; Responsible AI practices in economic applications)	3	
V	Open ended module		12	
	1	Economic Forecasting with Machine Learning (Explore how ML techniques can enhance economic forecasting; Discuss time series models, ensemble methods, and deep learning for predicting economic indicators (e.g., GDP growth, inflation rates); Consider the challenges of incorporating ML into existing forecasting frameworks)		
	2	Ethical and Social Implications of ML in Economics (Delve into the ethical considerations related to ML deployment in economic contexts; Discuss bias, fairness, and transparency; Explore case studies where ML models have had unintended consequences in economic decision-making)		
	3	Interdisciplinary Applications of ML in Economics (Investigate how ML intersects with other fields (e.g., behavioral economics, finance, development economics); Explore applications such as recommender systems for personalized financial advice, fraud detection, and impact evaluation. Encourage students to think beyond traditional economic paradigms)		

Note: The course is divided into five modules, with four modules together having total 22 fixed units and one open-ended module with a variable number of units. There are total 48 instructional hours for the fixed modules and 12 hours for the open-ended one. Internal assessments (30 marks) are split between the open-ended module (10 marks) and the fixed modules (20 marks). The final exam, however, covers only the 22 units from the fixed modules. The 70 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). An Introduction to Statistical Learning. New York: Springer.

ADDITIONAL READINGS

1. Murphy, K. P. (2012). Machine Learning: A Probabilistic Perspective. MIT Press.
2. Hastie, T., Tibshirani, R., Friedman, J., & Franklin, J. (2005). The Elements of Statistical Learning: Data Mining, Inference, and Prediction.
3. Bishop, C. M. (2006). Pattern Recognition and Machine Learning. Springer.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO 8	PSO9
CO 1	2	-	-	-	-	-	-	-	-
CO 2	-	2	-	-	-	-	-	-	-
CO 3	-	1	-	1	1	-	3	-	-
CO 4	-	2	-	3	1	2	-	2	3
CO 5	-	3	1	3	1	-	-	-	2

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar /Survey
- Internal Exam
- Practical Assignments
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	

General Foundation Courses in Economics

Programme	B.A. Economics				
Course Title	SECURITY TRADING PRACTICES				
Type of Course	MDC				
Semester	I				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic course on stock market of level 0 - 99				
Course Summary	This course is designed to provide a theoretical and practical background in the field of investments.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Students will acquire a conceptual foundation in the field of investments.	U	C	Instructor-created exams / Quiz
CO2	Learners will gain skills in designing and managing both bond and equity portfolios in real-world scenarios.	Ap	P	Practical Assignment using paper trading app
CO3	Students will be able to value various financial instruments, including equity and debt securities	An	P	Seminar Presentation / Group Discussion
CO4	Evaluate the characteristics of various avenues of investment.	E	M	Instructor-created exams / Home Assignments

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Investment Environment, Markets and Instruments		8	11
	1	Financial Market—Primary and Secondary market	1	
	2	instruments of secondary market;	1	
	3	Major Agencies of Secondary market: NSE, BSE, CDSL, NSDL, SEBI	2	
	4	Different types of trading—overview of derivative market, futures and options, Major indices of BSE and NSE.	2	
	5	Different trader in the secondary market—FIIs, DIIs, retailers	2	

II	Equity Selection		8	11
	6	The Fundamental Analysis: Meaning and importance	1	
	7	Important ratios; Price-to-Earnings (P/E) ratio-Price-to-Book (P/B) ratio -Dividend Yield, Earnings Per Share (EPS), ROCE and ROE, D/EBITDA, EV/ EBITDA	2	
	8	Technical Analysis: Meaning and importance	2	
	9	important methods—chart, candle sticks-- important indicators namely, Support, resistance, RSI, Moving Average, volume, price channel, VIX –	3	
III	Portfolio Creation		8	11
	10	Theories of portfolio creation: Capital Asset Pricing Model (CAPM), Arbitrage Pricing Theory (APT), Markowitz portfolio theory, Behavioural Portfolio Theory	4	
	11	Different types of Brokers-- Process of opening a demat account with a discount broker--	2	
	12	Maintain trading account details— P& L statement-- capital gain – capital gain tax -- details that are to be included in the income tax return.	2	
IV	Trade Management		12	17
	13	Different Sectors in secondary market eg Banking, Auto, pharma, IT, infrastructure, FMCG etc.	2	
	14	Portfolio allocation and selection in different sectors. Maintaining risk- reward—Position sizing of equities	2	
	15	Capital building through cumulative investment	2	
	16	Trader psychology—need and approach to maintain good psychology by a trader	2	
	17	Practice—download a virtual trading platform and selection	1	
	18	Creating portfolio composing of multiple segments	1	
	19	Getting familiar with the demat account of any one broker preferably select one who do not charge AMC or brokerage fees	2	
V	Open Ended Module		9	
		Analyze the current trend Draw accurate trend lines Identify crucial support and resistance levels Make informed decisions on entry and exit points Trade in range-bound markets Use trading signals with different indicators		

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, is only for the external examination.

REFERENCE:

1. "Investments" by Zvi Bodie, Alex Kane, and Alan J. Marcus (McGraw-Hill, 12th edition, 2023)
2. "The Stock Market Game" by Robert Hagstrom (John Wiley & Sons, 10th edition, 2022)
3. "Investing for Dummies" by Matthew Krantz (Wiley, 6th edition, 2023)
4. "The Intelligent Investor" by Benjamin Graham (HarperCollins, Revised edition by Jason Zweig, 2003)

5. "Security Analysis" by Benjamin Graham, David L. Dodd, and Sidney B. Zweig (McGraw-Hill, 8th edition, 2014)
6. "Technical Analysis Explained" by Martin Pring (McGraw-Hill, 5th edition, 2018)
7. "Trading in the Zone" by Mark Douglas (Harriman House Publishers, 3rd edition, 2011)
8. "Demat and Trading Guide" by NSE Academy (Available online at nseindia.com)
9. "A Random Walk Down Wall Street" by Burton Malkiel (Norton, 13th edition, 2023)
10. "The Art of Asset Allocation" by Roger Ibbotson and Rex Sinquefeld (Wiley, 5th edition, 2019)

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2	-	-
CO 3	3	-	-	1	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	-	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓

Programme	B.A. Economics				
Course Title	DIGITAL ECONOMY				
Type of Course	MDC				
Semester	II				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic course on Economics of 0 – 99 level				
Course Summary	This course is designed to provide a theoretical and practical knowledge about digital economy				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the Historical foundations and impact of the digital economy.	U	C	Instructor-created exams / Quiz, Assignment
CO2	Analyze business and innovation in the digital age.	An	P	Case Study Analysis,
CO3	Critically evaluate the role of data and analytics.	E	M	Research Paper, Debate Participation
CO4	Assess the policy and social implications of the digital economy.	Ap	p	Instructor-created exams / Home Assignments

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Foundations of the Digital Economy		12	17
	1	The Rise of the Digital Economy: Historical context, key technologies, economic impact of digital economy on economic growth, productivity and employment.	2	
	2	Definition and Meaning of Digital Economy	1	
	3	Digital Goods and Services: Characteristics, pricing models, and distribution channels.	2	
	4	Platforms and Marketplaces: Two-sided markets, network effects, and platform power.	2	
	5	Data & Information Economics: The information value chain, big data.	2	
	6	Privacy: Data protection and security – privacy concerns	1	

	7	Theories of Digital Economy: Growth theory of digital economy –endogenous growth theory – monetary theory of digital economy	2	
II	Business and Innovation in the Digital Age		8	11
	8	E-commerce and Online Retail: Business models, customer behaviour, and logistics challenges.	2	
	9	Logistic – Logistic – models – challenges of E-commerce		
	10	The Sharing Economy: Collaborative consumption, platform competition, and regulatory issues.	2	
	11	Fintech and Financial Innovation: Digital payments, cryptocurrencies, and blockchain technology	2	
	12	Digital Transformation and Strategy: How businesses are adapting to the digital environment.	2	
III	Data and Analytics		8	11
	13	The Role of Data and Analytics – Big data, data analytics, and their importance in the digital economy.	3	
	14	Emerging trends and technologies shaping the future of the digital economy, such as AI, blockchain, and the metaverse.	4	
	15	The ethical implications of data collection and usage	1	
IV	Policy and Social Implications of the Digital Economy		8	11
	16	Competition Policy and Antitrust in the Digital Era: Regulating platform monopolies and market dominance	2	
	17	Intellectual Property and Copyright in the Digital Age: Challenges of protecting digital content and innovation.	2	
	18	Digital Divide and Inequality: Access to technology, skills development, and social justice concerns.	2	
	19	The Future of Work in the Digital Economy: Automation, job displacement, and new skills requirements.	2	
IV	Digital Economy and India		9	
		Discussion based on different digital systems, platforms, technologies, etc. prevailing in India		
		Practical Assignments on digital economy in India		
		Seminar on the digital economy and shaping of policies in India		

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Harld Overby and Jan Arild Audestad (2021). *Introduction to Digital Economics: Foundation, Business Models and Case Studies*. Springer.
2. Don Tapscott and Anthony D. Williams (2016). *The Digital Economy: Concepts and Applications*. McGraw-Hill Education (Module I)
3. Liu, Z. (2022). *Principles of Digital Economics: Innovation Theory in the Age of Intelligence*. Springer Nature. (Module 1, Unit 7)

ADDITIONAL READINGS

1. Mayer-Schönberger, V., & Cukier, K. (2013). *Big data: A Revolution that Will Transform how We Live, Work, and Think*. Houghton Mifflin Harcourt.
2. Davenport, T., & Harris, J. (2017). *Competing on Analytics: Updated, with a New Introduction: The New Science of Winning*. Harvard Business Press.
3. Russell, S., & Norvig, P. (2021). *Artificial Intelligence: A Modern Approach*, Global Edition. Pearson Higher Ed.
4. Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Profile Books.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	2	-	1	1	-	1	-	-
CO 2	2	3	3	3	-	2	2	-	-
CO 3		1	-	2	2	3	2	-	-
CO 4	2	3	1	3	3	1	3	-	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (30%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓			✓
CO 2	✓		✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓

Programme	B.A. Economics				
Course Title	FINANCIAL LITERACY AND PERSONAL FINANCE				
Type of Course	Value Added Course				
Semester	III				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic course on Economics of 0 – 99 level				
Course Summary	This course provokes the students on the importance of personal financial planning and imparts basic financial literacy principles, with the intention of building in them capability to manage personal finances optimally in various stages of life.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic principles of personal finance and its applications.	U	C	Instructor- created exams / Quiz
CO2	Develop and practice the skill of planning and managing personal finances efficiently.	Ap	P	Practical Assignment / Creating a sample personal financial plan
CO3	Help the students master the concept of time value of money and provide them with necessary skills to beat inflation and maintain the purchasing power of money.	U	C	Seminar Presentation / Group Discussion
CO4	Understand and apply structured personal financial techniques in real life situations.	Ap	P	Instructor- created exams / Home Assignments
CO5	Provide the students with an understanding of various financial products like bank accounts, insurance products and equities and enable them	U	F	Writing assignments

	to acquire a diversified portfolio of financial products in real life.			
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to evaluate complex financial products.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Personal Financial Planning/Financial Literacy		10	14
	Basics of financial planning			
	1	Meaning of financial planning and the importance of financial planning.	1	
	2	Risk vs return (inflation risk, market risk and exchange risk).	1	
	3	Planning for the short, medium and long term.	3	
	4	Introducing financial products that suit short, medium and long time horizons.		
	5	Short term and money market or debt instruments		
	6	Long term and asset backed investments.		
	Time value of money			
	7	Inflation and its impact on personal financial security,	3	
	8	Concepts of absolute income and real income.		
	9	Concepts of nominal rate of interest and real rate of interest.		
	10	Principles of compounding and discounting.	2	
	II	The financial planning process		
11		The fact find or taking stock ones financial situation, identifying present provisions and shortfalls.	3	
12		Setting SMART (specific, measurable, achievable, realistic, timebound) financial goals.	2	
13		Concept of diversification-putting your eggs into different baskets.	1	
14		Physical assets like commodities (gold, silver and other precious metals) and properties.	2	
III	Financial products		08	11
	15	Savings bank accounts, current account, fixed deposits, recurring deposits. Introducing and debit cards. Modes of transfers-IMPS, NEFT, RTGS, UPI.	2	
	16	Bonds, debentures and other debt funds.	1	
	17	Equity market products, Risks involved in equity market investments. stocks, shares, equities, mutual funds, derivatives, options.	3	
	18	NSE, BSE, OTC Exchange of India. Stock market indices, Nifty, SENSEX, S&P, NASDAQ.	2	

IV	Insurance and pension products		10	14
	19	Insurance as a risk management device. Life insurance, (introduce various types of life products like term insurance, endowment plans,	2	
		unit-linked policies (ULIPs etc.), Riders in insurance (eg. critical illness benefit, hospitalisation benefit, permanent total disability etc.). Property and casualty insurance, health/medical insurance. Two rules of calculating life cover-multiples of salary and the inflation rule.	2	
	20	The need for retirement security. Pension products. Difference between statutory pension system and contributory pension. National Pension system and its features. Tier I and Tier II contributions in the NPS . Investment options-active choice and auto choice.	2	
	21	Annuities. Difference between annuities and pensions. Various types of annuities-fixed, variable and equity linked.	2	
	22	Retirement pension policies of life insurance companies. Annuity service providers (ASP). Role of IRDAI and PFRDA as regulators.	2	
V	Open Ended Module		9	
		Discussion based on the exit of governments from pension provision.		
		Practical Assignments to create a sample personal financial plan for an individual/ family making provisions for emergency funds, savings, insurances and retirement schemes.		
		Seminar/workshop on investor awareness with a focus on stock/equity investments.		

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Lokesh Sehgal (2023). Learn and Practice Financial Planning
2. Nevar Theodore Malabre (2020). Financial Literacy: Understanding the Basics of Financial Investments
3. Purvi Kothari and Keyur Mehta (2010). Financial Investment and Financial Planning

ADDITIONAL READING

1. Kana Sukumaran (2024). Personal Finance: A Treatise on Financial Literacy
2. Introduction to Financial Planning (2017) By Indian Institute of Banking and Finance
3. Prasanna Chandra. Financial Management: Theory and Practice

MAPPING OF COS WITH PSOS:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	3	-
CO 2	-	2	2	-	-	-	3	2	-
CO 3	-	3	2	-	1	-	1	1	-
CO 4	-	3	-	-	-	-	-	2	-
CO 5	-	-	-	-	-	-	2	3	-
CO 6	-	3	2	-	-	-	2	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	DIGITAL MARKETING AND E-COMMERCE STRATEGIES				
Type of Course	Value Added Course				
Semester	IV				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic course on Economics of 0 – 99 level				
Course Summary	The course equips students to understand the basics of marketing and how effectively they can use digital medias to run a successful business venture.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the basic principles of marketing	U	C	Instructor- created exams / Quiz
CO2	Develop and practice the skill of planning and managing e commerce	Ap	P	Practical Assignment / Creating a sample personal financial plan
CO3	Help the students master the concept of digital marketing and provide them with necessary skills to run an online business	U	C	Seminar Presentation /Group Discussion
CO4	Understand and apply digital marketing techniques in real business world.	Ap	P	Instructor- created exams /Home Assignments
CO5	Provide the students with an understanding of various digital platforms and marketing strategies and enable them to run successful business	U	F	Writing assignments
CO6	Demonstrate critical thinking and problem-solving skills by applying theacquired knowledge in complex business world	Ap	P	Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	Basic concepts of marketing		10	14
	1	Meaning of marketing	1	
	2	Customer value	1	
	3	Customer relationship management- concept and process	3	
	4	Customer buying behaviour		
	5	Buyer decision process		
	6	Competitor analysis	3	
	7	New product development		
	8	Price strategies		
	9	Positioning strategies	2	
10	Market targeting			
II	Introduction to Digital marketing		08	11
	11	Meaning, evolution and channels of digital marketing	3	
	12	Search Engine Optimization, Search Engine Marketing.	2	
	13	Content Marketing	1	
	14	Social media platforms and marketing	2	
III	The concept of E-Commerce		08	11
	15	Meaning and concept, E- commerce v/s Traditional Commerce	2	
	16	Importance, features & benefits of E- Commerce	1	
	17	Impacts, Challenges & Limitations of E- Commerce and Supply chain management	3	
	18	Payment systems and security issues	2	
IV	Website planning		10	14
	19	Website Planning & Creation : Content Marketing Strategy, Keywords Research and Analysis	3	
	20	Web Presence and Creating content	3	
	21	Different types of display advertising	2	
	22	Google analytics	2	
^v	Open Ended Module		9	
V		Discussion on various social media platforms		
		Practical Assignments case study on the success story of any popular e-commerce provider.		

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. E-Commerce Strategy, Technologies and Applications, Whitley, David, Tata McGraw Hill.
2. Philip Kotler and Eduardo Roberto, Social Marketing: Strategies for Changing Public Behavior, The Free Press, 1989.

ADDITIONAL READING

1. Philip Kotler, Marc Oliver Opresnik, and Kahzon Takaoko, *Digital Marketing Management and Transformation by Innovation* (2020) Philip Kotler and Christian Sarkar, *Losing Our Democracy* (2020)

MAPPING OF COS WITH PSOS:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	3	-
CO 2	-	2	2	-	-	-	3	2	-
CO 3	-	3	2	-	1	-	1	1	-
CO 4	-	3	-	-	-	-	-	2	-
CO 5	-	-	-	-	-	-	2	3	-
CO 6	-	3	2	-	-	-	2	2	-

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COS TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	BIG DATA ANALYSIS IN ECONOMICS				
Type of Course	SEC				
Semester	V				
Academic Level	100 - 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic Economics Course of 0 – 99 level				
Course Summary	The students will be able to identify the role of big data in economic theory, using big data for prediction purpose and make capable for helping private and public policies				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand the characteristics and sources of data	U	F	Instructor-created exams / Quiz
CO2	Analyze different Motivating applications	Ap	C	Practical Assignment / Observation of Practical Skills
CO3	Evaluate Architectures for big data collection	E	P	Seminar Presentation / Group Discussion
CO4	Apply Big Data for Prediction and Public Policy	Ap	P	Instructor-created exams / Home Assignments
CO5	Create programs for big data analytics	C	M	Running programs
CO6	Demonstrate critical thinking and problem-solving skills by applying the acquired knowledge to address complex economic challenges in the contemporary world.	Ap	M	Viva Voce

* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C)
- Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P)
Metacognitive Knowledge (M)

DETAILED SYLLABUS:

Module	Unit	Content	Hrs	Marks
I	The Role of Economic Theory in big data		8	10
	1	Characteristics of Big data.	2	
	2	The need for Analytics and Understanding Analytics: Impact of analytics on business; Being analytically competitive; Models and algorithms in Analytics; The Analytics Methodology	2	

	3	Advantages of big data in the economic research and policymaking	2	
	4	Challenges and risks in big data	2	
II	Major economic data sources		9	12
	5	Sources of big data - National and International	3	
	6	Motivating applications: web scraping, social media, Google.	3	
	7	Real time data (Social media and the labor market)	3	
III	Using Big Data to Advanced Economic Theory		9	14
	8	Tool and Tech Landscape: A review of technology used in data storage, data processing, and data science; Popular tools used in Data Science and when to use each	2	
	9	Using Big Data for Prediction and Public Policy	2	
	10	Architectures for big data collection, analysis, and storage.	1	
	11	Using micro data to answer macroeconomic questions	2	
	12	Finance and high frequency trading	2	
IV	Machine learning methods		10	14
	13	Linear Regression Models and their applications	1	
	14	Logistics Regression Models and their applications	2	
	15	Time Series Forecasting	2	
	16	k-nearest-neighbors, classification and regression trees, random forests.	1	
	17	An overview of neural networks and deep learning: Images, sounds, text, as sources of information.	1	
	18	Text mining: natural language processing, latent Dirichlet allocation, sentiment analysis.	1	
	19	Big Data Analytics with R.	2	
V	Open Ended Module		9	
		NFHS data extraction techniques		
		NSSO data extraction techniques		

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. “Big Data: A Revolution That Will Transform How We Live, Work, and Think” by Viktor Mayer-Schönberger and Kenneth Cukier, Houghton Mifflin Harcourt, 2013
2. “Machine-learning Techniques in Economics: New Tools for Predicting Economic Growth” by Atin Basuchoudhary, James T. Bang, and Tinni Sen, Springer.
3. “Data Science for Economics and Finance: Methodologies and Applications” edited by Sergio Consoli, Diego Reforgiato Recupero, and Michaela Saisana, Springer.
4. Antenucci, Dolan, et al. (2014) “Using social media to measure labor market flows.” Working paper no. w20010. National Bureau of Economic Research.

5. Athey, S. (2018). "The impact of machine learning on economics", in The Economics of Artificial Intelligence: An Agenda. University of Chicago Press.
6. BDS Taddy, M. (2019) Business Data Science: Combining Machine Learning and Economics to Optimize, Automate, and Accelerate Business Decisions. McGraw Hill.
7. Choi, Hyunyoung and Hal Varian (2009). "Predicting the present using Google Trends" Working paper.
8. Dave Donaldson and Adam Storeygard, The View from Above: Applications of Satellite Data in Economics, The Journal of Economic Perspectives, Fall 2016, Vol. 30, No. 4 (Fall 2016), pp. 171-198, Published by: American Economic Association.
9. Einav, Liran, and Jonathan D. Levin. (2013) "The data revolution and economic analysis." Working paper no. w19035. National Bureau of Economic Research.
10. Hal R. Varian, Big Data: New Tricks for Econometrics, The Journal of Economic Perspectives, Spring 2014, Vol. 28, No. 2 (Spring 2014), pp. 3-27, American Economic Association
11. Jay Liebowitz, "Big Data and Business Analytics" Auerbach Publications, CRC press (2013)
12. Liran Einav and Jonathan Levin, The Data Revolution and Economic Analysis, Innovation Policy and the Economy, Vol. 14, No. 1 (January 2014), pp. 1-24, The University of Chicago Press on behalf of the The National Bureau of Economic Research
13. Michael Berthold, David J. Hand, "Intelligent Data Analysis", Springer, 2007.
14. Seema Acharya, Subhasini Chellappan, "Big Data Analytics" Wiley 2015.
15. Sendhil Mullainathan and Jann Spiess, Machine Learning: An Applied Econometric Approach, The Journal of Economic Perspectives, Spring 2017, Vol. 31, No. 2 (Spring 2017), pp. 87-106, American Economic Association
16. Stephen Hawkins, Brief Answers to the Big Questions (Selected Chapters)
17. Yuval Harari, 21 Lessons for the 21st Century

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	3	2	2	3	2	3
CO 2	1	1	1	2	2	2	3	2	3
CO 3	1	1	1	2	2	2	3	2	3
CO 4	1	1	2	2	2	2	3	3	3
CO 5	2	2	1	3	2	2	3	3	3
CO 6	1	1	2	2	2	2	3	3	3

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam

- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓	✓	✓	✓
CO 3	✓	✓	✓	✓
CO 4	✓	✓	✓	✓
CO 5		✓	✓	
CO 6			✓	

Programme	B.A. Economics				
Course Title	ECONOMIC RESEARCH WITH R				
Type of Course	SEC				
Semester	VI				
Academic Level	100 – 199				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours
	3	3	-	-	45
Pre-requisites	Basic Economics, Basic Mathematics and Basic Statistics courses of 0 – 99 level				
Course Summary	This course provides an introductory exposure to Economics research using ‘R’ with imparting basic programming skills in the various functions in R, which enable the students to apply various functions learned in Economic Research.				

COURSE OUTCOMES (CO):

CO	CO Statement	Cognitive Level*	Knowledge Category#	Evaluation Tools used
CO1	Understand basic programming in R.	U	C	Instructor-created exams / Quiz
CO2	Analyse various loops and use them appropriately	Ap	P	Practical Assignment /Case Studies in the Indian context
CO3	Evaluate various data analysis tools and employ them appropriately.	U	P	Seminar Presentation / Group Discussion
CO4	Apply various functions/models in Economic Research	Ap	C	Instructor-created exams / Home Assignments/Cases in the Indian context
CO5	Design various models and use it in the data analysis.	E	P	Writing assignments
CO6	Demonstrate problem-solving skills by applying the acquired knowledge in R software to address complex economic challenges in the contemporary world.	Ap	P	Viva Voce
* - Remember (R), Understand (U), Apply (Ap), Analyse (An), Evaluate (E), Create (C) # - Factual Knowledge(F) Conceptual Knowledge (C) Procedural Knowledge (P) Metacognitive Knowledge (M)				

Module	Unit	Content	Hrs	Marks
I	Introduction to R and R studio.		7	10
	1	Basics of R programming	1	
	2	R Markdown files	2	
	3	Primitive Object Types: Vectors, List	2	
	4	Matrices, Arrays, Factors, Data frames.	2	
II	Loops in R and Functions in R.		6	8
	5	if, else, while and for loops.	2	
	6	apply () class functions	2	
	7	Writing your own function	2	
III	UNIT 3 Data management with Tidyverse		12	17
	8	Importing and exporting data	2	
	9	Introduction to tidyverse and tidy workflow	2	
	11	Data extraction	2	
	12	Data cleaning	1	
	13	Data formatting and wrangling	2	
	14	Creating summary statistics tables	1	
	15	Basic data analysis using tidyverse	2	
IV	UNIT 4 Data Visualisation and Basics of Plotting in R		11	15
	16	Creating plots with base R functions.	1	
	17	Introduction to ggplot. Data visualization using ggplot2	1	
	18	Linear models - Generic functions for extracting model information - Linear (Multiple Regression) Models	3	
	19	The (Model Formula in Straight Line Regression) - Analysis of variance (ANOVA) and ANOVA tables	6	
V	Open Ended Module		9	
	Use Various models learned in the above modules			

Note: The course is divided into five modules, with four modules together having total 19 fixed units and one open-ended module with a variable number of units. There are total 36 instructional hours for the fixed modules and 9 hours for the open-ended one. Internal assessments (25 marks) are split between the open-ended module (5 marks) and the fixed modules (20 marks). The final exam, however, covers only the 19 units from the fixed modules. The 50 marks shown in the last column, distributed over the first four modules, are only for the external examination.

REFERENCE:

1. Zamora Saiz, A., Quesada González, C., & Mondéjar Ruiz, D. (2020). Introduction to R. *An Introduction to Data Analysis in R: Hands-on Coding, Data Mining, Visualization and Statistics from Scratch*, 9-67.
2. Hafner, S. (2019). An Introduction to R for Beginners. (www.researchgate.net/publication/325170649_An_Introduction_to_R_for_Beginners).
3. <https://rstudio-education.github.io/hopr/preface.html>
4. <https://r4ds.had.co.nz/>

ADDITIONAL READINGS

1. Maindonald, J., & Braun, J. (2006). *Data analysis and graphics using R: an example-based approach* (Vol. 10). Cambridge University Press.
2. www.cran.r-project.org.

MAPPING OF COs WITH PSOs:

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	PSO9
CO 1	3	-	-	-	-	-	-	-	-
CO 2	-	3	-	1	-	-	2	-	-
CO 3	3	-	-	1	-	-	-	-	-
CO 4	-	3	1	2	-	-	3	1	-
CO 5	3	-	-	-	-	-	2	1	1
CO 6	-	2	2	3	3	-	3	1	1

CORRELATION LEVELS:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

ASSESSMENT RUBRICS:

- Quiz / Assignment/ Viva Voce/ Discussion / Seminar
- Internal Exam
- Practical Assignments (20%)
- Final Exam (70%)

MAPPING OF COs TO ASSESSMENT RUBRICS:

	Internal Exam	Quiz / Assignment/ Viva Voce/ Discussion / Seminar	Practical Assignment	End Semester Examination
CO 1	✓	✓		✓
CO 2	✓		✓	✓
CO 3	✓	✓		✓
CO 4	✓	✓		✓
CO 5		✓	✓	✓
CO 6			✓	