M.COM., CA

Syllabus

Program Code: PCC

2024 - Onwards

MANNAR THIRUMALAI NAICKER COLLEGE

(AUTONOMOUS)

Re-accredited with "A+" Grade by NAAC

PASUMALAI, MADURAI – 625 004

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS), MADURAI – 625 004

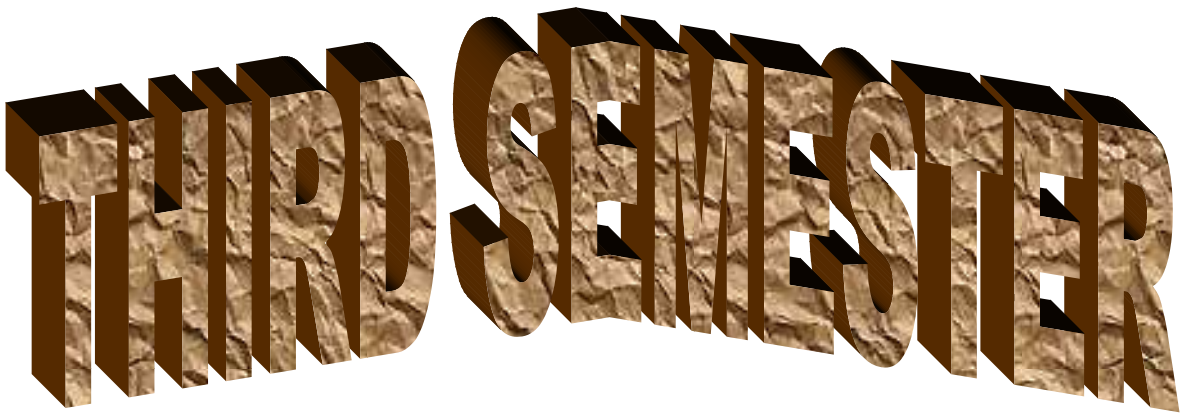
M. COM C.A CURRICULUM

(For the students admitted from the academic year 2024-2025 onwards)

Course Code	Title of the Course	Hrs	Credits	Maximum Marks		
				Int	Ext	Total
FIRST SEMESTER						
Part – III	**Core courses**					
24PCCCC11	Business Finance	6	5	25	75	100
24PCCCC12	Digital Marketing	6	5	25	75	100
24PCCCC13	Banking and Insurance	6	4	25	75	100
Part – III	**Elective courses**					
24PCCEC11	Introduction to Industry 4.0	6	3	25	75	100
24PCCEC12	Database Management System	6	3	25	75	100
	Total	30	20	125	375	500
SECOND SEMESTER						
Part – III	**Core courses**					
24PCCCC21	Strategic Cost Management	6	5	25	75	100
24PCCCC22	Corporate Accounting	6	5	25	75	100
24PCCCC23	Setting up of Business Entities	6	4	25	75	100
Part – III	**Elective courses**					
24PCCEC21	Data Mining and Data Interpretation	5	3	25	75	100
24PCCEC22	Management Information System	5	3	25	75	100
Part – IV	**Skill course**					
24PCCSP21	Advanced Excel – Lab	2	2	25	75	100
	Total	30	22	150	450	600
24PCCIN31	Internship* Industrial Activity	-	-	-	-	-

*** At the end of the semester, all the students should complete their internship during the summer vacation (April - May) for which the marks with due credits will be awarded in the third semester.**

Course Code	Title of the Course	Hrs	Credits	Maximum Marks		
				Int	Ext	Total
THIRD SEMESTER						
Part – III	**Core Courses**					
24PCCCC31	Taxation	6	5	25	75	100
24PCCCC32	Research Methodology	6	5	25	75	100
24PCCCP31	Computer Applications in Business	6	4	25	75	100
Part – III	**Elective Course**					
24PCCEC31	Python and R for Data Analytics	4	3	25	75	100
Part - IV	**Skill Enhancement course**					
24PCCSP31	Python and R for Data Analytics - Lab	2	2	25	75	100
Part - IV	**Non Major Elective Course**					
24PCCNM31	Office Automation - Lab	6	3	25	75	100
24PCCIN31	Internship / Industrial Activity	-	2	25	75	100
	Total	30	24	175	525	700
FOURTH SEMESTER						
Part – III	**Core Courses**					
24PCCCC41	Corporate and Economic Laws	6	5	25	75	100
24PCCCC42	Human Resource Analytics	6	5	25	75	100
24PCCCC43	International Business	6	5	25	75	100
24PCCPR51	Project with Viva - Voce	6	3	25	75	100
Part – III	**Elective Courses**					
24PCCEC41	Cyber and Data Security	4	3	25	75	100
Part – IV	**Skill Enhancement course**					
24PCCSP41	PHP Programming - Lab	2	2	25	75	100
Part - V	**Extension Activities**					
24PEXTG41	Extension Activity	-	1	40	60	100
	Total	30	24	190	510	700
	Grand Total	120	90	640	1860	2500


THIRD SEMESTER

Course Name	Taxation			
Course Code	24PCCCC31	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To identify deductions from gross total income and computation of income for different classes of assessees
- To understand the procedure for filing of returns and tax planning
- To analyse the structure on international business taxation
- To assess Goods and Services Tax and filing GST returns
- To compute customs duty as per Customs Act

UNIT - I Assessment of persons **18**

Tax Exemptions for Agricultural Income - Deductions to be made in computing total income (80G, 80GGB & 80GGC, 80IA, 80IAB, 80IAC, 80IB, 80IBA, 80ID, 80IE, 80JJA, 80JJAA, 80LA, 80M, 80P, 80PA) – Assessment of Firms, AOP, BOI, Company and Co-operative society.

UNIT - II Tax Returns and Tax planning **18**

Return of income: Statutory obligation, Return Forms, Time for filing of return, Revised return, Modified return–Assessment -Tax Deducted at Source - Advance payment of Tax: Persons liable to pay, Due date, Computation - Payment in pursuance of order of Assessing Officer, Consequences on non-payment. – Tax planning, Tax avoidance and Tax evasion - Tax planning and specific management decisions: Make or buy, Own or lease, Retain or replace, Shut down or continue.

UNIT - III International business taxation **18**

International business taxation - Taxation of Non-resident - Double taxation relief - Transfer pricing and other anti-avoidance measure - Application and interpretation of tax treaties - (Double taxation avoidance agreement - DTAA) - Equalization levy.

UNIT - IV Goods and Services Tax **18**

Goods and Services Tax: GST Act, 2017 - Registration – Procedure for registration under Schedule III – Amendment of registration – Rates of Tax of IGST, CGST, SGST/UGTST - Assessment of GST- Self-assessment – Provisional assessment – Scrutiny of returns – Assessment of non filers of returns – Assessment of unregistered persons – Assessment in certain special cases – Tax Invoice – Credit and Debit Notes – Payment of Tax – Input Tax Credit - Anti profiteering –- Filing of Returns- Penalties – Prosecution – Appeal and Revision.

UNIT - V Customs Act, 1962 **18**

Customs Act, 1962: Important Definitions – Basics – Importance of Customs Duty – Constitutional authority for levy of Customs Duty – Types of Customs Duty – Prohibition of Importation and Exportation of goods – Valuation of goods for Customs Duty – Transaction Value – Assessable Value – Computation of Assessable Value and Customs Duty.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Vinod Singhania and Kapil Singhania, Direct Taxes Law & Practice Professional Edition, Taxmann Publications, New Delhi
- Mehrotra H.C. and Goyal S.P, Income Tax including Tax Planning & Management, Sahitya Bhawan Publications, Agra
- Sekar G, "Direct Taxes" - A Ready Refresher, Sitaraman C. & Co Pvt.Ltd., Chennai.
- Balachandran V, (2021) Textbook of GST and Customs Law, Sultan Chand and Sons, New Delhi
- Vandana Bangar and Yogendra Bangar, "Comprehensive Guide to Taxation" (Vol. I and II), Aadhya Prakashan, Prayagraj (UP).

BOOKS FOR REFERENCES:

- Sha R. G. and Usha Devi N.,(2022) "Income Tax" (Direct and Indirect Tax), Himalaya Publishing House, Mumbai.
- Girish Ahuja and Ravi Gupta, "Practical Approach to Direct and Indirect Taxes: Containing Income Tax and GST", Wolters Kluwer India Private Limited
- Swetha Jain, GST Law & Practice, Taxmann Publishers Pvt. Ltd, Chennai.
- Daty V.S., "GST - Input Tax Credit", Taxmann Publishers, Chennai.
- Anurag Pandy, "Law & Practices of GST and Service Tax"- Sumedha Publication House, New Delhi.

WEB RESOURCES:

- **https://www.icsi.edu/media/webmodules/16112021_Advance_Tax_Laws.pdf**
- **https://www.icsi.edu/media/webmodules/Final_Direct_Tax_Law_17_12_2020.pdf**
- **https://www.icsi.edu/media/webmodules/TL_Final_pdf_25102021.pdf**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		✓	GLOBAL		
Changes Made in the Course	Percentage of Change			No Changes Made		✓	New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Estimate taxable income	**K1 to K5**
CO2	File returns and plan taxes	**K1 to K5**
CO3	Illustrate the nuances of international business taxation	**K1 to K5**
CO4	Apply the provisions of GST	**K1 to K5**
CO5	Assess the provisions of Customs Act	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	3	3				
CO2	3	3	3	3	3	3				

CO3	3	3	3	3	3	3				
CO4	3	3	3	3	3	3				
CO5	3	3	3	3	3	3				

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	2	3		
CO 2	2	2	3		
CO 3	3	2	3		
CO 4	3	2	3		
CO 5	3	3	3		
WEIGHTAGE	14	11	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.8	2.2	3.0		

LESSON PLAN:

UNIT	Taxation	HRS	PEDAGOGY
I	Assessment of persons	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Tax Returns and Tax planning	18	Chalk and talk, Power Point Presentation, Video Lectures
III	International business taxation	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Goods and Services Tax	18	Chalk and talk, Power Point Presentation, Video Lectures
V	Customs Act, 1962	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Research Methodology			
Course Code	24PCCCC32	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To understand the fundamentals of research
- To construct theoretical design and formulate hypotheses
- To evaluate the data collection techniques
- To perform parametric and non-parametric tests
- To enhance report writing skills and develop ethical conduct in research

UNIT - I Introduction to Research Methodology **18**

Research: Definition – Objectives – Motivations for research – Types of research – Maintaining objectivity in research – Criteria of good research – Applications of research in business - Formulating a research problem – Literature Review – Reasons for review – Reference management tools - Identification of research gap – Framing of objectives.

UNIT - II Hypothesis Testing and Research Design **18**

Hypothesis – Formulation of hypothesis – Testing of hypothesis – Type I and Type II errors – Research design – Types of research design - Methods of data collection: Census, Sample survey, Case study – Sampling: Steps in sampling design, Methods of sampling – Testing of reliability and validity – Sampling errors.

UNIT - III Data Collection **18**

Variable: Meaning and types - Techniques of data collection – Primary data: Meaning, Advantages and limitations – Techniques: Interview, Schedule, Questionnaire, Observation – Secondary Data: Meaning and sources.

UNIT - IV Data Analysis **18**

Data Analysis – Uni-variate Analysis: Percentile, Mean, Median, Mode, Standard deviation, Range, Minimum, Maximum, Independent sample t-test – Bi-variate analysis: Simple correlation, Simple Regression, Chi-square, Paired samples t-test, ANOVA, Man-Whitney test – Wilcoxon signed rank test – Kruskal Wallis test (Simple problems) Multi Variate Analysis: Multiple Correlation, Multiple Regression, Factor Analysis, Friedman's test, Cluster analysis, Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM), Multiple Discriminant Analysis.

UNIT - V Preparation of Research Report **18**

Report preparation – Guidelines and precautions for interpretation – Steps in Report writing - Style of research reports (APA, MLA, Anderson, Harvard) – Mechanics of report writing – Ethics in Research – Avoiding plagiarism – Plagiarism checker tools – Funding agencies for business research.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Tripathi, (2014) "Research Methodology in Management and Social Sciences". Sultan Chand & Sons, New Delhi.
- Kothari C.R and Gaurav Garg, (2020) "Research Methodology" – Methods and Techniques. New Age International (P) Limited, New Delhi.
- Krishnaswami and Ranganathan, (2011) "Methodology of Research in Social Sciences", Himalaya Publishing House, Mumbai.

BOOKS FOR REFERENCES:

- Donald R. Cooper, Pamela S. Schindler and J.K.Sharma, "Business Research
- Methodology", 12th Edition, Tata Mcgraw Hill, Noida (UP).
- Sashi K.Guptha and Parneet Rangi,(2018) "Research Methodology" , Kalyani
- Publisher, Ludhiana.
- Sharma R D and Hardeep Chahal, (2004) "Research Methodology In Commerce and Management", Anmol Publications, New Delhi

WEB RESOURCES:

- **https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_ science_students/ln_research_method_final.pdf**
- **https://ccsuniversity.ac.in/bridge-library/pdf/MPhil%20Stats%20Research%20Methodology-Part1.pdf**
- **https://prog.lmu.edu.ng/colleges_CMS/document/books/EIE%20510%20LECTURE%20N**
- **OTES%20first.pdf**
- **https://www.statisticssolutions.com/academic-research-consulting/data-analysis-plan/**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made	✓	New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		K LEVEL
After studying this course, the students will be able to:		
CO1	Recall the research concepts and recognise the research problem	K1 to K5
CO2	Formulate research hypothesis and determine the sample size	K1 to K5
CO3	Select appropriate method for data collection	K1 to K5
CO4	Make inferences based on statistical tests	K1 to K5
CO5	Draft a research report avoiding plagiarism	K1 to K5

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	2	2	3				
CO2	3	3	3	2	2	3				
CO3	3	3	3	2	2	3				
CO4	3	3	3	2	2	3				
CO5	3	3	3	2	2	3				

S- STRONG M – MEDIUM L - LOW

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	2	3	3		
CO 2	2	3	3		
CO 3	2	3	3		
CO 4	2	3	3		
CO 5	2	3	3		
WEIGHTAGE	10	15	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.0	3.0	3.0		

LESSON PLAN:

UNIT	Research Methodology	HRS	PEDAGOGY
I	Introduction to Research Methodology	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Hypothesis Testing and Research Design	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Data Collection	18	Chalk and talk, Power Point Presentation,

			Video Lectures
IV	Data Analysis	**18**	**Chalk and talk, Power Point Presentation, Video Lectures**
V	Preparation of Research Report	**18**	**Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	Section A (Multiple Choice Questions)	Section B (Either / Or Choice)	Section C (Either / Or Choice)	Total Marks	% of (Marks without choice)	Consolidate of %
CIA I	K1	2			2	6.67	13.33
	K2	2			2	6.67	
	K3		5		5	33.33	16.67
	K4			8	8	53.33	26.67
	K5		5	8	13	86.66	43.33
	Marks	4	10	16	30	186.66	100
CIA II	K1	2			2	6.67	30
	K2	2	5		7	40	
	K3			8	8	53.33	26.67
	K4		5		5	33.33	16.66
	K5			8	8	53.33	26.67
	Marks	4	10	16	30	186.66	100

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	**Section A (Multiple Choice Questions)**	**Section B (Either or Choice**	**Section C (Either/ or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5			5	**6.67**	**6.67**
K2	5	5		10	**20**	**13.33**
K3		5	16	26	**69.33**	**34.67**
K4		5	8	18	**48**	**24**
K5			16	16	**42.66**	**21.33**
Marks	**10**	**25**	**40**	**75**	**186.66**	**100**
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	**Unit**	**CO**	**K-level**		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Computer Applications in Business			
Course Code	24PCCCP31	**L**	**P**	**C**
Category	Core	6	-	4

COURSE OBJECTIVES:

- To understand the fundamentals of SPSS
- To compare the values obtained in t-test and ANOVA
- To perform regression and non-parametric tests
- To create company, groups and ledgers and obtain financial statements using Tally Prime
- To understand inventory management and account for goods and services tax

UNIT - I Introduction to SPSS **18**

Opening a data file in SPSS – Variable view – Data view – Entering data into the data editor – Saving the data file– Table creation – Descriptive statistics: Percentile values, Measures of central tendency, Measures of dispersion, Distribution – Cronbach's Alpha test – Charts and graphs - Editing and copying SPSS output.

UNIT - II Parametric Tests in SPSS **18**

Compare means: One-sample t-test, Independent Samples t-test, Paired-samples t-test and One-way ANOVA, Two-way ANOVA - Correlation: Bi-variate, Partial and Multiple. Simple linear regression.

UNIT - III Non-parametric Tests in SPSS **18**

Chi-square test - Mann Whitney's test for independent samples – Wilcoxon matched pairs sample test– Friedman's test – Wilcoxon signed rank test – Kruskal Wallis test

UNIT - IV Introduction to Tally Prime **18**

Tally Prime: Introduction – Starting Tally Prime – Creation of a Company - Selecting company - Shutting a company - Altering company– Creating Accounting groups and ledgers – Vouchers – Practical problems for a new and existing business and not-for profit organisation. Accounting reports: Introduction – Displaying Trial balance, Profit and Loss Account, Balance sheet, Day book, Purchase register, Sales register, Cash flow/Funds flow and ratio analysis – Practical problems..

UNIT - V Inventory and GST in Tally Prime **18**

Inventory: Introduction to Inventory Masters – Creation of stock group – Creation of Godown – Creation of unit of measurement – Creation of stock item – Entering inventory details in Accounting vouchers – Practical problems. GST: Introduction – Enabling GST – Defining tax details – Entries in Accounting vouchers – View invoice report – Practical problems.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Sundara Pandian. P, Muthulakshmi. S & Vijayakumar, T (2022), Research Methodology & Applications of SPSS in Social Science Research, Sultan Chand & Sons, New Delhi
- Morgan George. A, Barrett C Karen, Leech L Nancy and Gloeckner Gene W (2019), IBM SPSS for Introductory Statistics, Routledge, 6th Edition, U.K
- Official Guide to Financial Accounting using Tally Prime (2021), BPB Publication, Delhi
- Chheda Rajesh, U (2020), Learn Tally Prime, Ane Books, 4th Edition, New Delhi

BOOKS FOR REFERENCES:

- Kulas John, Renata Garcia Prieto Palacios Roji, Smith Adams (2021), IBM SPSS Essentials: Managing and Analysing Social Sciences Data, 2nd Edition, John Wiley & Sons Inc., New York
- Rajathi. A, Chandran. P (2011), SPSS for You, MJP Publishers, Chennai
- Sangwan Rakesh (2022), Learn Tally Prime in English, Ascend Prime Publication, Pilani
- Lodha Roshan (2022), Tally Prime with GST Accounting, Law Point Publication, Kolkata

WEB RESOURCES:

- **https://www.spss-tutorials.com/basics/**
- **https://www.tallyclub.in/**
- **https://tallysolutions.com/business-guides/inventory-management-in-tally-erp9/**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Create data file in SPSS	**K1 to K5**
CO2	Examine Means of samples	**K1 to K5**
CO3	Conduct non-parametric tests	**K1 to K5**
CO4	Create a company, form groups and get automated financial statements	**K1 to K5**
CO5	Automate inventory management and GST filing	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	3	2	2	3	3				
CO2	3	3	2	2	3	3				
CO3	3	3	2	2	3	3				
CO4	3	3	2	3	3	3				
CO5	3	3	2	3	3	3				
S- STRONG				M – MEDIUM				L - LOW		

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	2	3	3		
CO 2	2	3	3		
CO 3	2	3	3		
CO 4	3	3	3		
CO 5	3	3	3		
WEIGHTAGE	12	15	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.4	3.0	3.0		

LESSON PLAN:			
UNIT	Computers in Business	HRS	PEDAGOGY
I	Introduction to SPSS	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Parametric Tests in SPSS	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Non-parametric Tests in SPSS	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Introduction to Tally Prime	18	Chalk and talk, Power Point Presentation, Video Lectures

V	Inventory and GST in Tally Prime	**18**	**Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Python and R for Data Analytics			
Course Code	24PCCEC31	**L**	**P**	**C**
Category	Elective	4	-	3

COURSE OBJECTIVES:

- To understand the basics of Python
- To learn Bio Python
- To understand the features of R
- To learn data handling
- To identify the use of bio conductor

UNIT - I Introduction to Python **12**

Installation of Python - Variables - Types - Strings - Jupiter notebooks - Objects - Functions - Control structures - Operators - User-Defined Functions - Data Structures - List,Tuple -Dictionary.

UNIT - II Numpy and Scipy **12**

Numpy library – Ndarrray - Basic Operations - Conditions and Boolean Arrays - Shape Manipulation - Array Manipulation - General Concepts - Structured Arrays - Reading and Writing Array on Files - SciPy Library for Statistics: linalg sub package - Normality- Correlation - t-Test- Chi-Test- ANOVA.

UNIT - III R Programming **12**

Introduction to R - Installing R - Features of R - Reserved words - Operators, -Strings - Data types and operations - Basic Data types – Vectors - List, Matrices – Arrays - Factors - Data frames - Flow control - Decision making - Loop Control Statements - Loops.

UNIT - IV Visualisation using R **12**

R as a Deluxe Calculator - Creating Objects and Assigning Values - Graphics: Simple Plotting - Advanced Plotting - Using Color in Plots - Using Subscripts and Superscripts in Graph Labels - Interactive Graphics - Saving Graphical Output - Loops.

UNIT - V Data Handling **12**

Feature selection models - Data Preprocessing - Normalization - Methods - Data reduction - Data sampling - Heat maps - Classification: Based on analogy - rules - probabilities - statistics and prediction with R.

Total Lecture Hours **60**

BOOKS FOR STUDY:

- Fabio Nelli (2018), "Python Data Analytics with Pandas,Numpy and Matplotlib", 2nd Edition, Apress, New York.
- Wes McKinney, "Python for Data Analysis", 2nd Edition, O'Reilly publication, USA.
- Jeeva Jose (2018),"Beginner's Guide for Data Analysis using R Programming", Khanna Book Publishing Co. Ltd., New Delhi.
- Norman Matloff (2011), "The Art of R programming - A tour of statistical software design", 1st Edition, No Starch Press, USA.

BOOKS FOR REFERENCES:

- Mark Lutz (2009), "Learning Python", O'Reilly Media Publication, USA.
- Martin C Brown (2001), "Python: The Complete Reference". McGraw-Hill Media, USA.
- Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S, "Bioinformatics and Computational Biology Solutions Using R and Bioconductor", Springer, New York.

WEB RESOURCES:

- **www.sthurlow.com/python/**
- **www.learnpython.org**
- **www.codecademy.com/en/tracks/python**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Describe the basics of Python	**K1 to K5**
CO2	Explain the necessity for programming in biology	**K1 to K5**
CO3	Apply R programming	**K1 to K5**
CO4	Discuss Data handling	**K1 to K5**
CO5	Apply R in Phylogenetics	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	2	2	1	2				
CO2	2	2	2	2	1	2				
CO3	3	3	3	3	2	3				
CO4	3	3	3	3	3	3				
CO5	3	3	3	3	3	3				

S- STRONG	M – MEDIUM	L - LOW

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	1	2	3		
CO 2	1	2	2		
CO 3	2	3	3		
CO 4	3	3	3		
CO 5	3	3	3		
WEIGHTAGE	10	13	14		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2	2.6	2.8		

LESSON PLAN:

UNIT		HRS	PEDAGOGY
I	Introduction to Python	12	Chalk and talk, Power Point Presentation, Video Lectures
II	Numpy and Scipy	12	Chalk and talk, Power Point Presentation, Video Lectures
III	R Programming	12	Chalk and talk, Power Point Presentation, Video Lectures
IV	Visualisation using R	12	Chalk and talk, Power Point Presentation, Video Lectures
V	Data Handling	12	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K4, K4)
	CO2	**K1 – K5**	2	K2,K2	2(K3, K3)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K4, K4)
	CO4	**K1 – K5**	2	K2,K2	2(K3, K3)	2(K4, K4)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K4**	
		OR		
16. b)	**Unit - I**	**CO1**	**K4**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Python and R for Data Analytics - Lab			
Course Code	24PCCSP31	**L**	**P**	**C**
Category	Elective	-	2	2

COURSE OBJECTIVES:

- To learn how to write loops and decision statements in Python.
- To learn how to use lists, tuples, and dictionaries in Python.
- To learn statistical programming, computation, graphics, and modelling.
- To learn Writing functions and use R in an efficient way.
- To learn the basic types of statistical models.

List of Programs **30**

1. Programs using For and while statements in Python.
2. Programs using decision making statements in Python.
3. Programs using user defined functions in Python.
4. List creation, accessing elements.
5. Program to find the size of a Tuple.
6. Program to find the sum of all items in a dictionary.
7. Program to perform array manipulation using Numpy
8. Making operations on if-else statements in R.
9. Programs on For loop in R.
10. Programs on While loop in R.
11. Implement different String Manipulation functions in R.
12. Perform various operations on lists in R.
13. Creating and operations on factors in R.
14. Implement different data structures in R (Vectors, Lists, and Data Frames).
15. Create pie charts and bar charts using R.

Total Lecture Hours	**30**

BOOKS FOR STUDY:

- Mark Lutz (2009), "Learning Python", O"Reilly Media Publication, USA.
- Jared P.Lander, R for Everyone: Advanced Analytics and Graphics,2 nd Edition, Pearson Education,2018.
- S.R.Mani Sekharand T.V.Suresh Kumar, Programming with R, 1 st Edition,CENGAGE,2017.

BOOKS FOR REFERENCES:

- R. Nageswara Rao, "Core Python Programming", Dreamtech
- Think Python, Allen B.Downey, Shroff Publishers & Distributors Pvt. Ltd., Fifth Indian Reprint, August 2018
- Data Visualization with R: 111 Examples by Thomas Rahlf, Springer, 2020

WEB RESOURCES:

- **https://www.tutorialspoint.com/r/index.htm**
- **https://www.r-project.org/**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		
*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**								

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Understand the basic concepts of Python Programming.	**K1 to K5**
CO2	Able to work with built in and user defined functions in Python.	**K1 to K5**
CO3	Show the installation of R Programming Environment.	**K1 to K5**
CO4	Make use of different R Data Structures.	**K1 to K5**
CO5	Analyze the data sets using R programming	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	2	2	2	2	2	2	2	2	2	2
CO2	2	3	2	2	2	3	2	2	2	2
CO3	3	1	2	3	3	2	3	3	3	2
CO4	2	2	2	3	3	3	2	3	3	2
CO5	3	3	2	3	3	3	2	3	3	2

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:					
COS	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO 1	**2**	**2**	**2**	**3**	**2**
CO 2	**2**	**2**	**3**	**2**	**3**
CO 3	**3**	**2**	**2**	**2**	**2**
CO 4	**3**	**2**	**3**	**3**	**3**
CO 5	**3**	**2**	**3**	**3**	**3**
WEIGHTAGE	**13**	**10**	**13**	**13**	**13**
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	**87**	**67**	**87**	**87**	**87**

LESSON PLAN:

UNIT	Python and R for Data Analytics - Lab	HRS	PEDAGOGY
	1. Programs using For and while statements in Python. 2. Programs using decision making statements in Python. 3. Programs using user defined functions in Python. 4. List creation, accessing elements. 5. Program to find the size of a Tuple. 6. Program to find the sum of all items in a dictionary. 7. Program to perform array manipulation using Numpy 8. Making operations on if-else statements in R. 9. Programs on For loop in R. 10. Programs on While loop in R. 11. Implement different String Manipulation functions in R. 12. Perform various operations on lists in R. 13. Creating and operations on factors in R. 14. Implement different data structures in R (Vectors, Lists, and Data Frames). 15. Create pie charts and bar charts using R.	**30**	**Laboratory Experiments**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
CIA	**CO1**	**K1**	5				
	CO2	**K2**		5			
	CO3	**K3**			5		
	CO4	**K4**				5	
	CO5	**K5**					5
Question Pattern CIA		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	2.5	2.5	2.5	2.5	2.5
		Total Marks for each section	5	5	5	5	5

Distribution of Marks with K Level CIA									
	K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
CIA	**K1**	5					5	20	20
	K2		5				5	20	20
	K3			5			5	20	20
	K4				5	5	10	40	40
	K5								
	Marks	**5**	**5**	**5**	**5**	**5**	**25**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)							
S. No.	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
1	**CO1**	**K1**	15				
2	**CO2**	**K2**		15			
3	**CO3**	**K3**			15		
4	**CO4**	**K4**				15	
5	**CO5**	**K4**					15
No. of Questions to be Asked			2	2	2	2	2
No. of Questions to be answered			2	2	2	2	2
Marks for each question			7.5	7.5	7.5	7.5	7.5
Total Marks for each section			15	15	15	15	15

Distribution of Marks with K Level								
K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	15					**15**	**20**	**20**
K2		15				**15**	**20**	**20**
K3			15			15	20	20
K4				15	15	30	40	40
Marks	**15**	**15**	**15**	**15**	**15**	**75**	**100**	**100**
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.								

Course Name	Office Automation - Lab			
Course Code	24PCCNM31	**L**	**P**	**C**
Category	Non Major Elective	-	6	3

COURSE OBJECTIVES:

- To know how to use the most common Microsoft Office programs
- To be able to create documents for printing and sharing
- To be able to create and share presentations
- To be able to manage and store data in a spreadsheet

List of Programs **90**

MS-WORD

1. Text Manipulation: Write a paragraph about your institution and change the font size and type, Spell check, Aligning and justification of Text
2. Bio data: Prepare a Bio-data.
3. Find and Replace: Write a paragraph about yourself and do the following. Find and Replace - Use Numbering Bullets, Footer and Headers.
4. Tables and manipulation: Creation, Insertion, Deletion (Columns and Rows). Create a mark sheet.
5. Mail Merge: Prepare an invitation to invite your friends to your birthday party. Prepare at least five letters.

MS-EXCEL

6. Data Sorting-Ascending and Descending (both numbers and alphabets)
7. Mark list preparation for a student
8. Individual Pay Bill preparation.
9. Invoice Report preparation.
10. Drawing Graphs. Take your own table.

MS-POWERPOINT

11. Create a slide show presentation for a seminar.
12. Preparation of Organization Charts
13. Create a slide show presentation to display percentage of marks in each semester for all Students
14. Use bar chart (X-axis: Semester, Y-axis: % marks).
15. Use different presentation template different transition effect for each slide

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Comdex Information Technology course tool kit Vikas Gupta, WILEY Dreamtech,2005

BOOKS FOR REFERENCES:

- The Complete Computer upgrade and repair book,3rd edition Cheryl A Schmidt, WILEY Dream tech
- Introduction to Information Technology, ITL Education Solutions limited, Pearson Education. PC Hardware and A + Handbook – Kate J. Chas PHI (Microsoft)

WEB RESOURCES:

- **https://edu.gcfglobal.org/en/subjects/office/**
- **https://support.microsoft.com/en-us/training**
- **https://www.office.com/**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Understand which tasks each of the major Office programs can perform.	**K1 to K5**
CO2	Independently create professional-looking documents, presentations, and spreadsheets.	**K1 to K5**
CO3	Familiar with some advanced Office functions, including Mail Merge (Word) and formulas (Excel).	**K1 to K5**
CO4	Understanding the process of inserting graphics, pictures, and table of contents, Drop Cap	**K1 to K5**
CO5	Set up slide shows and rehearse timings for your slides	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	2	1	2	2	2	2	2
CO2	3	3	2	2	2	2	1	2	2	2
CO3	2	2	2	3	2	3	2	2	2	1
CO4	2	1	2	3	3	3	2	2	2	2
CO5	2	2	3	2	2	2	2	3	1	2

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:					
COS	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**
CO 1	**3**	**2**	**2**	**3**	**3**
CO 2	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**
CO 4	**3**	**3**	**3**	**3**	**3**
CO 5	**3**	**3**	**3**	**3**	**3**
WEIGHTAGE	**15**	**14**	**14**	**15**	**15**
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	**100**	**93.3**	**93.3**	**100**	**100**

LESSON PLAN:

UNIT	Office Automation - Lab	HRS	PEDAGOGY
	MS-WORD 1. Text Manipulation: Write a paragraph about your institution and change the font size and type, Spell check, Aligning and justification of Text 2. Bio data: Prepare a Bio-data. 3. Find and Replace: Write a paragraph about yourself and do the following. Find and Replace - Use Numbering Bullets, Footer and Headers. 4. Tables and manipulation: Creation, Insertion, Deletion (Columns and Rows). Create a mark sheet. 5. Mail Merge: Prepare an invitation to invite your friends to your birthday party. Prepare at least five letters. MS-EXCEL 6. Data Sorting-Ascending and Descending (both numbers and alphabets) 7. Mark list preparation for a student 8. Individual Pay Bill preparation. 9. Invoice Report preparation. 10. Drawing Graphs. Take your own table. MS-POWERPOINT 11. Create a slide show presentation for a seminar. 12. Preparation of Organization Charts 13. Create a slide show presentation to display percentage of marks in each semester for all Students 14. Use bar chart (X-axis: Semester, Y-axis: % marks). 15. Use different presentation template different transition effect for each slide	**30**	**Hands on Training**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding & Implementation**	**Debugging & Output**
CIAI	**CO1**	**K1**	5				
	CO2	**K2**		5			
	CO3	**K3**			5		
	CO4	**K3**				5	
	CO5	**K4**					5
Question Pattern CIA		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	2.5	2.5	2.5	2.5	2.5
		Total Marks for each section	5	5	5	5	5

Distribution of Marks with K Level CIA									
	K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Implementation**	**Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
CIA	**K1**	5					5	20	20
	K2		5				5	20	20
	K3			5	5		10	40	40
	K4					5	5	20	20
	Marks						25	100	100

K1- Remembering and recalling facts with specific answers
K2- Basic understanding of facts and stating main ideas with general answers
K3- Application oriented- Solving Problems
K4- Examining, analyzing, presentation and make inferences with evidences
K5 – Evaluate, combine, Criticize, Predict, Convince.
CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)							
S. No.	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
1	**CO1**	**K1**	15				
2	**CO2**	**K2**		15			
3	**CO3**	**K3**			15		
4	**CO4**	**K3**				15	
5	**CO5**	**K4**					15
Question Pattern		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	7.5	7.5	7.5	7.5	7.5
		Total Marks for each section	15	15	15	15	15

Distribution of Marks with K Level								
K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	15					15	20	20
K2		15				15	20	20
K3			15	15		30	40	40
K4					15	15	20	20
Marks	**15**	**15**	**15**	**15**	**15**	**75**	**100**	**100**
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.								

Course Name	Internship Report			
Course Code	24PCCIN31	**L**	**P**	**C**
Category	Summer Internship	-	-	2

COURSE AIMS:

The aim of this skill-enhancing core paper is to bridge the gap between theoretical knowledge and practical application, fostering a spirit of inquiry and research rigor among M.Com students. It encourages students to explore and analyze the intricate dynamics of various industries. Through this course, students will develop the ability to work collaboratively, gather and evaluate relevant industry information, and present their findings in a structured and standardized format.

Process:

The internship can be undertaken either individually or as a group, where M.Com students are free to choose a company, industry, financial institution, auditor's office, or any other relevant organization of their choice. The internship shall consist of a minimum of **30 hours** of practical training in an organization (with size, type, and location specified by the respective college) during the vacation period between the **second and third semesters**. If the vacation period is insufficient, the college may make necessary adjustments to facilitate the training, allowing students to complete it before starting their third semester after completing their second semester examinations.

Key Guidelines:

1. The internship period should be a minimum of **30 hours**.
2. Each group or individual must obtain a **permission letter** and submit an **attendance certificate** from the organization.
3. A designated **supervisor** will guide and monitor the students throughout the internship.
4. Students are required to submit an **Internship Training Report** with a maximum limit of **50 pages**.
5. Marks for the Internship Training will be awarded solely based on the **Internship Training Report**.
6. Students must obtain prior permission from the chosen organization and communicate the details to the college to ensure effective supervision by the assigned faculty.
7. A **final report** (Institutional Training Record – ITR) must be submitted, containing a comprehensive introduction to the industry, a profile of the company, and a valid conclusion highlighting the benefits derived from the training. The final report should not exceed **30 A4 pages**, submitted in a spiral-bound or pre-printed format specifically designed for this purpose.

Reporting Proforma:
The company profile included in the report may contain:

- Organization chart and key personnel involved.
- Year of establishment and growth pattern over at least the last five years.
- Products or services offered and the target market.
- Sales turnover and market share for the past three years.
- Competitor details and market positioning.
- Number of employees and their brief profile.
- Share capital and shareholding pattern.
- Market capitalization (for listed public companies).
- Group companies, awards, recognitions, and any ongoing litigations, if applicable.

Report Content:
The final Internship Training Report should include the following sections:
(a) Introduction to the Training, including a profile of the organization.
(b) Objectives of the Training.
(c) Scope of the Training.
(d) Limitations of the Training.
(e) Details about the Organization.
(f) Functioning of various departments within the Organization.
(g) Inferences drawn from the training.
(h) Conclusion summarizing the key insights and benefits.

Outcome:
The internship report will be evaluated through an **internal assessment** conducted by the assigned faculty supervisor and the Head of the Department (HOD) at the beginning of the third semester. The evaluation will result in the award of **two credits**, with the marks reported to the university.

Evaluation/Assessment of Student Intern:
The internship report will be evaluated by a panel of experts, including the **faculty guide, observation report, and HOD**, each contributing 40 marks, and the average of these marks will be considered for the final evaluation.

Internal Evaluation	Internship Format & Presentation	25 Marks
External Evaluation	Internship Report	40 Marks
	Viva Voce	35 Marks
	Total	100 Marks

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL	✓	NATIONAL		GLOBAL	
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Cultivate the necessary work habits, ethics, and professional attitudes required for achieving success in a competitive job environment.	**K1 to K4**
CO2	Provide students with an opportunity to build a solid record of hands-on work experience, enhancing their employability and professional competence.	**K1 to K4**
CO3	Facilitate the integration of theoretical concepts with real-world applications, allowing students to explore diverse career paths and gain practical insights into various industry roles.	**K1 to K4**
CO4	Expose students to professional role models and develop essential skills such as effective communication, teamwork, problem-solving, and critical thinking, which are vital for career advancement.	**K1 to K4**
CO5	Encourage students to develop and refine employer-valued competencies such as teamwork, effective communication, attention to detail, time management, and adaptability, preparing them for future professional challenges.	**K1 to K4**

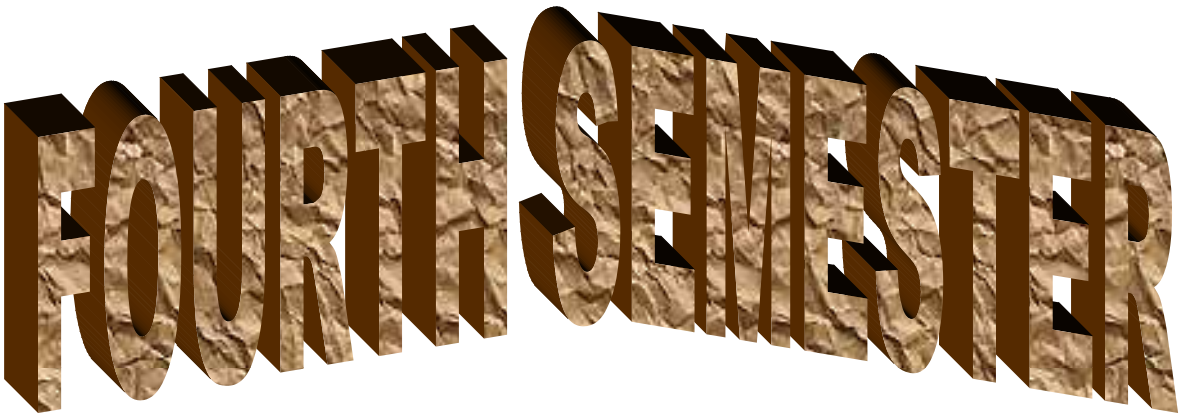
MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	S	S	M	M	M	S	S	S
CO2	S	S	M	M	M	S	S	S
CO3	S	S	M	M	M	S	S	S
CO4	S	S	M	M	M	S	S	S
CO5	S	S	M	M	M	S	S	S

S- STRONG **M – MEDIUM** **L - LOW**

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3	3	3
CO 2	3	3	3	3	3
CO 3	3	3	3	3	3
CO 4	3	3	3	3	3
CO 5	3	3	3	3	3
WEIGHTAGE	15	15	15	15	15
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	3.0	3.0	3.0	3.0	3.0


FOURTH SEMESTER

Course Name	Corporate and Economic Laws			
Course Code	24PCCCC41	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To analyse current and capital account transactions and deal with foreign currency under FEMA Act
- To understand unethical competitive practices and forums for redressal of consumer disputes under Competition Act and Consumer Protection Act
- To understand the procedure for obtaining patents and copyright under The Copyright and Patents Act
- To evaluate offences and punishment for money laundering under Prevention of Money Laundering Act
- To explain the registration and related procedures under Real Estate Act

UNIT - I Introduction to Foreign Exchange Management Act, 1999 18

Foreign Exchange Management Act, 1999: Introduction – Definitions – Current Account transactions – Capital Account transactions – Realisation, repatriation and surrender of foreign currency – Remittance of assets – Possession and retention of foreign currency or foreign coins – Authorised person – Adjudication and Appeal.

UNIT - II Competition Act, 2002 and Consumer Prptectoion Act 2019 18

Competition Act, 2002: Objective – Prohibition of Agreements, Prohibition of Abuse of Dominant Position - Regulation of combinations **-** Competition Commission of India: Duties, Powers and Functions of Commission - Appellate Tribunal.

The Consumer Protection Act, 2019: Objects; Rights of consumers – Consumer Dispute Redressal Commissions - Consumer protection councils – Procedure for admission to complaints – Appeal against orders.

UNIT - III Law relating to intellectual property rights 18

Law relating to intellectual property rights: Introduction - The Copyright Act, 1957: Works in which copyright subsist - Ownership of copyright and the rights of the owner - Assignment of copyright - Disputes with respect to assignment of copyright - Term of copyright - Registration of copyright - Infringement of copyright.

The Patents Act, 1970: Inventions not patentable - Applications for patents - Publication and examination of applications - Grant of patents and rights conferred - Register of patents. Trademarks Act, 1999: Conditions for registration - Procedure for and duration of registration - Effect of registration - Collective marks.

UNIT - IV Prevention of Money Laundering Act, 2002 18

Prevention of Money Laundering Act, 2002: Offence of money laundering –Punishment for money laundering –Attachment, adjudication and confiscation - Obligations of Banking Companies, Financial Institutions and Intermediaries – Summons, Search and Seizure – Appellate Tribunal.

UNIT - V Real Estate (Regulation and Development) Act, 2016 18

Real Estate (Regulation and Development) Act, 2016: Introduction - Salient features of the Act - Registration of Real Estate Project – Registration of Real Estate agents – Functions and duties of promoter – Rights and duties of Allottees – Offences, penalties and adjudication – Specimen agreement for sale to be executed between the promoter and the allottee.

Total Lecture Hours 90

BOOKS FOR STUDY:

- Munish Bandari (2022), A Textbook on Corporate and Economic Laws, 33rd Edition, Bestword Publications, New Delhi
- Amit Vohra and Rachit Dhingra (2022), Economic, Business and Commercial Laws, 18th Edition, Bharat Book House, Siliguri
- Pankaj Garg (2021), Taxmann's Corporate and Economic Laws, 7th Edition, Taxmann Publications, New Delhi

BOOKS FOR REFERENCES:

- Sekar G and Saravana Prasath B (2022), Students' Handbook on Corporate and Economic Law, Commercial Law Publishers (India) Pvt.Ltd.,, New Delhi
- Taxmann (2021), FEMA & FDI Ready Reckoner, 15th Edition, Taxmann Publications, New Delhi
- Ahuja V.K. and Archa Vashishtha (2020), Intellectual Property Rights (contemporary Developments), Thomson Reuters, Toronto, (CAN)

WEB RESOURCES:

- **https://resource.cdn.icai.org/67333bos54154-m3cp1.pdf**
- **https://resource.cdn.icai.org/67335bos54154-m3cp3.pdf**
- **https://resource.cdn.icai.org/68523bos54855-cp1.pdf**
- **https://resource.cdn.icai.org/68524bos54855-cp2.pdf**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP				
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		✓	GLOBAL			
Changes Made in the Course	Percentage of Change			No Changes Made			New Course		✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Evaluate the provisions of the Competition Act, 2002 and Consumer Protection Act to govern commercial competition and protect a consumer	**K1 to K5**
CO2	Recall the process relating to obtaining copyrights and patents.	**K1 to K5**
CO3	Examine the provisions of Money Laundering Act	**K1 to K5**
CO4	Analyse the provisions relating to regulation of real estate.	**K1 to K5**
CO5	Evaluate the provisions of the Competition Act, 2002 and Consumer Protection Act to govern commercial competition and protect a consumer	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	2	3	3				
CO2	3	3	3	2	2	3				
CO3	3	3	2	2	2	3				
CO4	3	3	3	3	3	3				
CO5	3	3	2	2	3	3				
S- STRONG				M – MEDIUM				L - LOW		

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	2	3		
CO 2	2	2	3		
CO 3	2	2	3		
CO 4	3	2	3		
CO 5	3	2	3		
WEIGHTAGE	13	10	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.6	2.0	3.0		

LESSON PLAN:

UNIT	Corporate and Economic Laws	HRS	PEDAGOGY
I	Introduction to Foreign Exchange Management Act, 1999	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Competition Act, 2002 and Consumer Protection Act 2019	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Law relating to intellectual property rights	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Prevention of Money Laundering Act, 2002	18	Chalk and talk, Power Point Presentation, Video Lectures
V	Real Estate (Regulation and Development) Act,	18	Chalk and talk,

	2016		**Power Point Presentation, Video Lectures, seminar and assignment**

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Human Resource Analytics			
Course Code	24PCCCC42	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To understand the concept and framework of human resource analytics
- To evaluate the process of human resource analytics and the relevant research tools
- To illustrate the evolution, types and design of HR metrics
- To deal with data collection and transformation
- To adopt tools and techniques for predictive modelling

UNIT - I Introduction to Human Resource Analytics **18**

Human Resource Analytics: Introduction – Concept – Evolution - Importance – Benefits – Challenges - Types of HR Analytics – HR Analytics Framework and Models.

UNIT - II Business Process and HR Analytics **18**

Business Process and HR Analytics: Introduction – Data Driven Decision Making in HR - Data Issues – Data Validity – Data Reliability - HR Research tools and techniques –Statistics and Statistics Modelling for HR Research

UNIT - III Introduction to HR Metrics **18**

HR Metrics: Introduction - Historical Evolution of HR metrics- Importance – Types of HR Metrics – Types of data - HR Metrics Design Principles — HR Scorecard – HR Dashboards.

UNIT - IV HR Analytics and Data **18**

HR Analytics and Data: Introduction – HR Data Collection – Data quality – Big data for Human Resources – Process of data collection for HR Analytics – Transforming data into HR information – HR Reporting – Data Visualization – Root cause analysis

UNIT - V HR Analytics and Predictive Modelling **18**

HR Analytics and Predictive Modelling: Introduction – HR Predictive Modelling – Different phases – Predictive analytic tools and techniques – Information for Predictive analysis - Software solutions - Predictive Analytic Models for Quantitative Data - Steps involved in predictive analytics.

Total Lecture Hours **90**

BOOKS FOR STUDY:

- Nishant Uppal (2020), Human Resource Analytics Strategic Decision Making, 1st Edition, Pearson Education Pvt. Ltd., Chennai
- Sarojkumar and Vikrant Verma (2022), HR analytics, Thakur Publication Pvt. Ltd, Lucknow.
- Dipak Kumar Bhattacharyya (2017), HR analytics: understanding theories and applications, 1st Edition, Sage Publications India Private Limited, New Delhi

BOOKS FOR REFERENCES:

- Ramesh Soundararajan and Kuldeep Singh (2019), Winning on HR analytics, Sage publishing, New Delhi
- Anshul Saxena (2021), HR analytics: quantifying the intangible, 1st Edition, Blue Rose publishers, New Delhi
- Michael J. Walsh (2021), "HR analytics essentials you always wanted to know", 7th Edition, Vibrant publishers, Mumbai.

WEB RESOURCES:

- **https://hbr.org/webinar/2017/06/leveraging-hr-analytics-in-strategic-decisions**
- **https://www.mbaknol.com/human-resource-management/human-resource-metrics/**
- **https://www.managementstudyguide.com/hr-metrics-and-workforce-analysis.htm**

Nature of Course	EMPLOYABILITY		✓	SKILL ORIENTED			ENTREPRENEURSHIP					
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL			GLOBAL		✓		
Changes Made in the Course	Percentage of Change			No Changes Made			New Course			✓		

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Examine the concept of human resource analytics	**K1 to K5**
CO2	Apply the HR tools and techniques in decision making	**K1 to K5**
CO3	Examine the different types of HR metrics and their relative merits	**K1 to K5**
CO4	Collect and transform data leading to HR reporting	**K1 to K5**
CO5	Build models for predictive analysis	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	3	3	3				
CO2	3	3	2	3	3	3				
CO3	3	3	2	3	3	3				
CO4	3	3	2	3	3	3				
CO5	3	3	2	3	3	3				
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3		
CO 2	3	3	3		
CO 3	3	3	3		
CO 4	3	3	3		
CO 5	3	3	3		
WEIGHTAGE	15	15	15		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	3.0	3.0	3.0		

LESSON PLAN:			
UNIT	Human Resource Analytics	HRS	PEDAGOGY
I	Introduction to Human Resource Analytics	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Business Process and HR Analytics	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Introduction to HR Metrics	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	HR Analytics and Data	18	Chalk and talk, Power Point Presentation, Video Lectures
V	HR Analytics and Predictive Modelling	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	International Business			
Course Code	24PCCCC43	**L**	**P**	**C**
Category	Core	6	-	5

COURSE OBJECTIVES:

- To understand the concepts of International Business and International Business Environment
- To analyse the different theories of International Business.
- To understand the legal procedures involved in International Business.
- To evaluate the different types of economic integrations.
- To analyse the operations of MNCs through real case assessment.

UNIT - I Introduction to International business **18**

International Business - Meaning, Nature, Scope and Importance- Stages of internationalization of Business-Methods of entry into foreign markets: Licensing- Franchising- Joint Ventures-Strategic Alliances- Subsidiaries and Acquisitions - Framework for analyzing international business environment-Domestic, Foreign and Global Environment-Recent Developments in International Business.

UNIT - II Theoretical Foundations of International business **18**

Theoretical Foundations of International Business: Theory of Mercantilism- Theory of Absolute and Comparative Cost Advantage - Haberler's Theory of Opportunity Cost- Heckscher- Ohlin Theory Market Imperfections Approach-Product Life Cycle Approach - Transaction Cost Approach - Dunning's Eclectic Theory of International Production.

UNIT - III Legal framework of International Business **18**

Legal framework of International Business: Nature and complexities: Code and common laws and their implications to Business-International Business contract - Legal provisions, Payment terms.

UNIT - IV Multi-Lateral Agreements and Institutions **18**

Multi-Lateral Agreements and Institutions: Economic Integration – Forms: Free Trade Area, Customs Union, Common Market and Economic Union-Regional Blocks: Developed and Developing Countries-NAFTA-EU-SAARC, ASEAN - BRICS - OPEC-Promotional role played by IMF-World Bank and its affiliates- IFC, MIGA and ICSID – ADB -Regulatory role played by WTO and UNCTAD.

UNIT - V Multinational Companies (MNCs) and Host Countries **18**

Multinational Companies (MNCs) and Host Countries: MNCs – Nature and characteristics. Decision Making-Intra Firm Trade and Transfer Pricing – Technology Transfer- Employment and labour relations-Management Practices- Host Country Government Policies-International Business and Developing countries: Motives of MNC operations in Developing Countries (Discuss case studies)-Challenges posed by MNCs..

Total Lecture Hours	**90**

BOOKS FOR STUDY:

- Charles W.L. Hill, International Business: Competing in the Global Market Place, Mc Graw Hill, NewYork
- Charles W. L. Hill, Chow How Wee & Krishna Udayasankar, International Business: An Asian Perspective- Mc Graw Hill, New York
- Rakesh Mohan Joshi (2009), International Business, Oxford University Press

BOOKS FOR REFERENCES:

- Donald Ball, Michael Geringer, Michael Minor & Jeanne McNett, International Business: The Challenge of Global Competition, Mc Graw Hill Education, NewYork
- Alan M Rugman & Simon Collinson, International Business: Pearson Education, Singapore

WEB RESOURCES:

- **https://www.icsi.edu/media/webmodules/publications/9.5%20International%20Business.pdf**
- **https://ebooks.lpude.in/commerce/mcom/term_3/DCOM501_INTERNATIONAL_BUSINESS.pdf**
- **https://www.shobhituniversity.ac.in/pdf/econtent/International-Business-Unit-1-Dr-Neha-Yajurvedi.pdf**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED		ENTREPRENEURSHIP	✓					
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓			
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓					
*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**											

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Recall the concepts of International Business and International Business Environment	**K1 to K5**
CO2	Analyze different theories of International Business	**K1 to K5**
CO3	Evaluate the legal procedures involved in International Business.	**K1 to K5**
CO4	Explain the different types of economic integrations.	**K1 to K5**
CO5	Identify the operations of MNCs through real case assessment	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	3	1	2	2	2				
CO2	3	2	3	1	3	3				
CO3	2	1	2	3	2	2				
CO4	1	3	1	2	1	1				
CO5	3	2	2	2	2	2				
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	1	2		
CO 2	2	2	1		
CO 3	3	3	3		
CO 4	2	2	2		
CO 5	1	1	1		
WEIGHTAGE	11	9	9		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2.2	1.8	1.8		

LESSON PLAN:			
UNIT	International Business	HRS	PEDAGOGY
I	Introduction to International business	18	Chalk and talk, Power Point Presentation, Video Lectures
II	Theoretical Foundations of International business	18	Chalk and talk, Power Point Presentation, Video Lectures
III	Legal framework of International Business	18	Chalk and talk, Power Point Presentation, Video Lectures
IV	Multi-Lateral Agreements and Institutions	18	Chalk and talk, Power Point Presentation, Video Lectures
V	Multinational Companies (MNCs) and Host Countries	18	Chalk and talk, Power Point Presentation, Video Lectures, seminar and assignment

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	Project with Viva - Voce			
Course Code	24PCCPR51	**L**	**P**	**C**
Category	Core	6	-	3

COURSE OBJECTIVES:

- Develop the ability of the students to prepare a project.
- Give the practical exposure in the field of commerce and business.
- Skill Development & Able to take business decisions by taking research
- Develops skills for Entrepreneurship.
- Develop the ability to analyze and to prepare report

REGULATIONS FOR THE PROJECT REPORT:

- The topic of the project may be based on research articles from commerce journals or any topic not covered in the M.Com syllabus.
- Internal examinations are the respective supervisors.
- Viva Voce examination to be evaluated by the external examiner.
- The report of the project must be in the prescribed form. It should be typed neatly in MS Word. The font size of the letter should be 12 point with double space.
- The format of the project report should have the following components.
  - First page should contain:
    - Title of the project report
    - Name of the candidate.
    - Register number
    - Name of the Supervisor.
    - Address of the institution.
    - Month & Year of submission.
  - Contents.
  - Declaration by Candidate.
  - Certificate by Supervisor
  - Acknowledgement
  - List of tables
  - List of figures
  - Chapters (not exceeding five)
- The number of pages in the project may be 50 to 80.
- Two copies of the project report with binding should be submitted.

Course Description

The Project is conducted by the following Course Pattern.

Total Lecture Hours	**90**

Internal

Presentation Submission **25**

External

Project Report Viva Voce 75

Total **100**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made	✓	New Course			
***Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**								

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Develop the ability of the students to prepare a project.	**K1 to K5**
CO2	Give the practical exposure in the field of commerce and business.	**K1 to K5**
CO3	Skill Development & Able to take business decisions by taking research	**K1 to K5**
CO4	Develops skills for Entrepreneurship	**K1 to K5**
CO5	Develop the ability to analyze and to prepare report	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/ PO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	**3**	**2**	**2**	**3**	**2**	**2**				
CO2	**3**	**3**	**3**	**3**	**3**	**3**				
CO3	**3**	**3**	**3**	**3**	**3**	**3**				
CO4	**2**	**3**	**3**	**2**	**3**	**3**				
CO5	**2**	**2**	**2**	**2**	**2**	**2**				

S -STRONG **M – MEDIUM** **L – LOW**

Distribution of Marks with COs &K Level for Correction of CIA					
	COs	**K - Level**	**Distribution of the work of the experiment**	**K - Level**	**MARKS**
CIA	**CO1**	**K1 to K5**	Preliminary Research Problem - Introduction	**K1**	**4.0**
	CO2	**K1 to K5**	Literature Survey	**K2**	**5.0**
	CO3	**K1 to K5**	Understanding and Observation of the Data	**K3**	**8.0**
	CO4	**K1 to K5**	Results and Discussion	**K4**	**4.0**
	CO5	**K1 to K5**	Interpretation of result and Conclusion	**K5**	**4.0**
	Total Marks				**25**

Distribution of Marks with K Level CIA					
	K Level	**Distribution of the work of the experiment**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA	K1	Preliminary Research Problem - Introduction	4	16.0	**-**
	K2	Literature Survey	5	20.0	
	K3	Understanding and Observation of the Data	8	32.0	**36.0**
	K4	Results and Discussion	4	16.0	**68.0**
	K5	Interpretation of result and Conclusion	4	16.0	**84.0**
	Marks		**25**	**100**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 – Evaluating, interpreting and concluding the results with accurate measurements**.**

Distribution of Marks with COs &K Level for Correction of the Summative Exam				
COs	**K - Level**	**Distribution of the work of the experiment**	**K - Level**	**MARKS**
CO1	**K1 to K5**	Preliminary Research Problem - Introduction	**K1**	**10**
CO2	**K1 to K5**	Literature Survey and scope of the problem	**K2**	**10**
CO3	**K1 to K5**	Understanding and Observation of the Data	**K3**	**20**
CO4	**K1 to K5**	Results and Discussion	**K4**	**15**
CO5	**K1 to K5**	Viva Voce	**K5**	**20**
Total Marks				**75**

Distribution of Marks with K Level				
K Level	**Parameters for K-Level**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	Preliminary Research Problem - Introduction	**10**	**13.33**	**13.3**
K2	Literature Survey	**10**	**13.33**	**13.3**
K3	Understanding and Observation of the Data	**20**	**26.67**	**26.7**
K4	Results and Discussion	**15**	**20.0**	**20**
K5	Viva Voce	**20**	**26.67**	**26.7**
Marks		**75**	**100**	**100**

Course Name	Cyber and Data Security			
Course Code	24PCCEC41	L	P	C
Category	Elective	4	-	3

COURSE OBJECTIVES:

- To understand threats and risks in cyber security landscape
- To interpret cyber security framework and regulations
- To examine data security and integrity regulations
- To discuss network security management
- To recall cybersecurity disasters

UNIT - I Cyber security Landscape **12**

Cybersecurity Landscape: Threats that are related to current and emerging trends, cyber security awareness, high profile cybercrime statistics and methods, the importance and functions of Governance, Risk Management, and Compliance in Cyber security program management, best practices in risk management including the domains of risk assessment and risk treatment, the structure and content of Cybersecurity-related strategy, plans, and planning. types of vulnerabilities and frauds in different domains eg. Financial and Banking, Ecommerce, Telecom, GDPR.

UNIT - II Cyber security Frameworks **12**

Cybersecurity Frameworks: International and industry-specific cybersecurity regulations, challenges to organisation, multiple security regulations, Define key concepts and terminology in Cybersecurity, threats to cybersecurity, strategies to identify and remediate vulnerabilities in information assets, the systemic components (including personnel) necessary for an effective cybersecurity program, NIST Framework.

UNIT - III Data Security and Managing Network Security **12**

Data Security: Data Integrity and Security, digital security, Data volume and velocity, Bigdata, multiple data sources, data diversity, Data (dis)organization, Unique data storage requirements, Security tools, Inflexible reporting and query systems. The issues and practices associated with managing network security, Identify the practices, tools, and methodologies associated with assessing network security.

UNIT - IV Cyber security Incidents **12**

Cybersecurity Incidents: Hacking attempts, web site defacement, denial of service attacks, information disclosures, natural and man-made cybersecurity disasters, the components of a cybersecurity contingency planning program, contingency strategies including data backup and recovery and continuity of cybersecurity operations

UNIT - V Cyber security Disasters **12**

Cybersecurity Disasters: The components and structure of an effective cybersecurity disaster recovery program, the components and structure of an effective cybersecurity incident response program. Digital ecosystem, Cloud computing.

Total Lecture Hours **60**

BOOKS FOR STUDY:

- Nina Godbole, SunitBelapure(2016), "Cyber Security", Wiley India, New Delhi.
- Avantika Yadav (2017), "Cyber security", Narosa Publishing House Pvt Ltd. New Delhi.
- Tim Mather, Subra Kumaraswamy, Shahed Latif (2010), "Cloud Security and Privacy", OREILLY Media, USA.

BOOKS FOR REFERENCES:

- Nina Godbole, "Information Systems Security", Wiley India, New Delhi.
- Kennetch J. Knapp, "Cyber Security & Global Information Assurance", Information Science Publishing.
- Thomas J Mowbray (2016), "Cyber Security Managing Systems, Conducting Testing and Investigating Intrusions", Wiley India Pvt. Ltd, New Delhi.

WEB RESOURCES:

- **https://mrcet.com/pdf/Lab%20Manuals/IT/CYBER%20SECURITY%20(R18A0521).pdf**
- **http://www.uptti.ac.in/classroom-content/data/cyber%20security%20unit-3.pdf**

Nature of Course	EMPLOYABILITY	✓	SKILL ORIENTED		ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change	20%	No Changes Made		New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Develop plans to mitigate risks and threats to cybersecurity	**K1 to K5**
CO2	Solve vulnerabilities in cybersecurity frameworks	**K1 to K5**
CO3	Solve issues in integrity issues in cybersecurity	**K1 to K5**
CO4	Implement the strategies to overcome cybersecurity incidents	**K1 to K5**
CO5	Formulate strategies to overcome cybersecurity disasters	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	3	3	2	2				
CO2	3	3	3	3	2	2				
CO3	3	3	3	3	2	2				
CO4	3	3	2	3	2	2				
CO5	3	3	2	3	2	2				

S- STRONG	M – MEDIUM	L - LOW

CO / PO MAPPING:

COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	2	3	2		
CO 2	2	2	3		
CO 3	2	2	3		
CO 4	2	2	2		
CO 5	2	3	3		
WEIGHTAGE	10	12	13		
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	2	2.4	2.6		

LESSON PLAN:

UNIT	Cyber and Data Security	HRS	PEDAGOGY
I	Cybersecurity Landscape	12	Chalk and talk, Power Point Presentation, Video Lectures
II	Cybersecurity Frameworks	12	Chalk and talk, Power Point Presentation, Video Lectures
III	Data Security and Managing Network Security	12	Chalk and talk, Power Point Presentation, Video Lectures
IV	Cybersecurity Incidents	12	Chalk and talk, Power Point Presentation, Video Lectures
V	Cybersecurity Disasters	12	Chalk and talk, Power Point Presentation, Video Lectures

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)						
Internal	**Cos**	**K Level**	**Section A**		**Section B Either or Choice**	**Section C Either or Choice**
			MCQs			
			No. of. Questions	**K - Level**		
CI AI	**CO1**	**K1 – K5**	2	K1,K1	2(K3, K3)	2(K5, K5)
	CO2	**K1 – K5**	2	K2,K2	2(K5, K5)	2(K4, K4)
CI AII	**CO3**	**K1 – K5**	2	K1,K1	2(K2, K2)	2(K5, K5)
	CO4	**K1 – K5**	2	K2,K2	2(K4, K4)	2(K3, K3)
Question Pattern CIA I & II		**No. of Questions to be asked**	4		4	4
		No. of Questions to be answered	4		2	2
		Marks for each question	1		5	8
		Total Marks for each section	4		10	16

Distribution of Marks with K Level CIA I & CIA II							
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Either / Or Choice)**	**Section C (Either / Or Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2			2	**6.67**	**13.33**
	K2	2			2	**6.67**	
	K3		5		5	**33.33**	**16.67**
	K4			8	8	**53.33**	**26.67**
	K5		5	8	13	**86.66**	**43.33**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**
CIA II	**K1**	2			2	**6.67**	**30**
	K2	2	5		7	**40**	
	K3			8	8	**53.33**	**26.67**
	K4		5		5	**33.33**	**16.66**
	K5			8	8	**53.33**	**26.67**
	Marks	**4**	**10**	**16**	**30**	**186.66**	**100**

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)						
S. No	Cos	K - Level	Section A (MCQs)		Section B (Either / or Choice) With K - LEVEL	Section C (Either / or Choice) With K - LEVEL
			No. of Questions	K – Level		
1	CO1	K1 – K5	2	K1, K2	2 (K3, K3)	2 (K5, K5)
2	CO2	K1 – K5	2	K1, K2	2 (K2,K2)	2 (K3,K3)
3	CO3	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K4,K4)
4	CO4	K1 – K5	2	K1, K2	2 (K3,K3)	2 (K5,K5)
5	CO5	K1 – K5	2	K1, K2	2 (K4,K4)	2 (K3,K3)
No. of Questions to be Asked			10		10	10
No. of Questions to be answered			10		5	5
Marks for each question			1		5	8
Total Marks for each section			10		25	40
(Figures in parenthesis denotes, questions should be asked with the given K level)						

Distribution of Marks with K Level						
K Level	Section A (Multiple Choice Questions)	Section B (Either or Choice	Section C (Either/ or Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5			5	6.67	6.67
K2	5	5		10	20	13.33
K3		5	16	26	69.33	34.67
K4		5	8	18	48	24
K5			16	16	42.66	21.33
Marks	10	25	40	75	186.66	100
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.						

Summative Examinations - Question Paper – Format

Q. No.	Unit	CO	K-level		
Answer **ALL** the questions				**PART – A**	**(10 x 1 = 10 Marks)**
1.	**Unit - I**	**CO1**	**K1**		
				a)	b)
				c)	d)
2.	**Unit - I**	**CO1**	**K2**		
				a)	b)
				c)	d)
3.	**Unit - II**	**CO2**	**K1**		
				a)	b)
				c)	d)
4.	**Unit - II**	**CO2**	**K2**		
				a)	b)
				c)	d)
5.	**Unit - III**	**CO3**	**K1**		
				a)	b)
				c)	d)
6.	**Unit - III**	**CO3**	**K2**		
				a)	b)
				c)	d)
7.	**Unit - IV**	**CO4**	**K1**		
				a)	b)
				c)	d)
8.	**Unit - IV**	**CO4**	**K2**		
				a)	b)
				c)	d)
9.	**Unit - V**	**CO5**	**K1**		
				a)	b)
				c)	d)
10.	**Unit - V**	**CO5**	**K2**		
				a)	b)
				c)	d)

Answer **ALL** the questions		**PART – B**		**(5 x 5 = 25 Marks)**
11. a)	**Unit - I**	**CO1**	**K3**	
		OR		
11. b)	**Unit - I**	**CO1**	**K3**	
12. a)	**Unit - II**	**CO2**	**K2**	
		OR		
12. b)	**Unit - II**	**CO2**	**K2**	
13. a)	**Unit - III**	**CO3**	**K4**	
		OR		
13. b)	**Unit - III**	**CO3**	**K4**	
14. a)	**Unit - IV**	**CO4**	**K3**	
		OR		
14. b)	**Unit - IV**	**CO4**	**K3**	
15. a)	**Unit - V**	**CO5**	**K4**	
		OR		
15. b)	**Unit - V**	**CO5**	**K4**	

Answer **ALL** the questions		**PART – C**		**(5 x 8 = 40 Marks)**
16. a)	**Unit - I**	**CO1**	**K5**	
		OR		
16. b)	**Unit - I**	**CO1**	**K5**	
17. a)	**Unit - II**	**CO2**	**K3**	
		OR		
17. b)	**Unit - II**	**CO2**	**K3**	
18. a)	**Unit - III**	**CO3**	**K4**	
		OR		
18. b)	**Unit - III**	**CO3**	**K4**	
19. a)	**Unit - IV**	**CO4**	**K5**	
		OR		
19. b)	**Unit - IV**	**CO4**	**K5**	
20. a)	**Unit - V**	**CO5**	**K3**	
		OR		
20. b)	**Unit - V**	**CO5**	**K3**	

Course Name	PHP Programming - Lab			
Course Code	24PCCSP41	**L**	**P**	**C**
Category	Skill	-	2	2

COURSE OBJECTIVES:

- Understand basic PHP style of programming and various techniques of web development.
- Understand the features like Form and Functions in PHP.
- Understand the String Functions, Array Function in PHP.
- Apply and Analyze PHP programs to design Real life problems using Cookies.
- Design Examine PHP programs using parsing functions.

List of Programs	**30**

1) Develop PHP program for Arithmetic operation using Form.
2) Develop PHP program to Reverse the given Number.
3) Develop PHP program Fibonacci Series without using recursive function.
4) Develop PHP program to display Alphabet-Triangle.
5) Develop PHP Program to Swapping two values Without Third Variable.
6) Develop PHP Program to check the palindrome number or not.
7) Develop a PHP program to find position of a sub string in a string.
8) Develop a PHP program and check message passing mechanism between pages.
9) Develop a PHP program to Count Number of Visits on a web page using cookies.
10) Develop a PHP program to Develop a PHP program using parsing functions.

Total Lecture Hours	**30**

BOOKS FOR STUDY:

- PHP A Beginner's Guide , VIKRAM VASWANI, Tata McGraw-Hill
- Dinesh Maidasani, PHP, Firewall Media (An Imprint of Laxmi Publication Pvt Ltd.,) First Edition, 2007, reprint 2008, 2013, New Delhi.

BOOKS FOR REFERENCES:

- Bayross (Ivan), Web Enabled Commercial Application Development using HTML, Java script, DHTML and PHP with CDROM, BPB Publication, FourthEdition, 2010, New Delhi.
- Guengerich (Steve), PHP6 and MYSQL, Willey India, Fourth Edition, 2014, New Delhi.
- Murah.J and Harris.R, PHP and MYSQL ,Mike Murach& Associates ,Inc., 2010

WEB RESOURCES:

- **https://www.javatpoint.com/php-tutorial**
- **https://www.phptpoint.com/php-tutorial/**
- **https://www.geeksforgeeks.org/php/**

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made	✓	New Course			

*** Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Design and Implement Interactive web page using Forms.	**K1 to K5**
CO2	Understand and Implement the function and array handling in PHP	**K1 to K5**
CO3	Utilizing the concept of String and date Function.	**K1 to K5**
CO4	Create web page using the message passing mechanism between pages.	**K1 to K5**
CO5	Understand and Apply the Strategies of handling Cookies in PHP	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:										
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	1	1	2	2	2	1	2	1	2	2
CO2	2	2	2	2	2	1	2	2	2	2
CO3	2	2	3	3	2	1	2	3	3	2
CO4	2	3	3	3	3	2	3	3	3	3
CO5	2	3	3	3	3	2	3	3	3	3
S- STRONG				M – MEDIUM					L - LOW	

CO / PO MAPPING:					
COS	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	3	3	3	3	3
CO 2	3	3	3	2	3
CO 3	2	3	2	3	3
CO 4	3	3	3	3	3
CO 5	3	3	3	3	3
WEIGHTAGE	14	15	14	14	15
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS	93	100	93	93	100

LESSON PLAN:

UNIT	PHP Programming - Lab	HRS	PEDAGOGY
	11) Develop PHP program for Arithmetic operation using Form. 12) Develop PHP program to Reverse the given Number. 13) Develop PHP program Fibonacci Series without using recursive function. 14) Develop PHP program to display Alphabet-Triangle. 15) Develop PHP Program to Swapping two values Without Third Variable. 16) Develop PHP Program to check the palindrome number or not. 17) Develop a PHP program to find position of a sub string in a string. 18) Develop a PHP program and check message passing mechanism between pages. 19) Develop a PHP program to Count Number of Visits on a web page using cookies. 20) Develop a PHP program to Develop a PHP program using parsing functions.	30	Lab Experiments

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding & Implementation**	**Debugging & Output**
CIAI	**CO1**	**K1**	5				
	CO2	**K2**		5			
	CO3	**K3**			5		
	CO4	**K3**				5	
	CO5	**K4**					5
Question Pattern CIA		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	2.5	2.5	2.5	2.5	2.5
		Total Marks for each section	5	5	5	5	5

Distribution of Marks with K Level CIA									
	K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Implementation**	**Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
CIA	**K1**	5					5	20	20
	K2		5				5	20	20
	K3			5	5		10	40	40
	K4					5	5	20	20
	Marks						25	100	100

K1- Remembering and recalling facts with specific answers

K2- Basic understanding of facts and stating main ideas with general answers

K3- Application oriented- Solving Problems

K4- Examining, analyzing, presentation and make inferences with evidences

K5 – Evaluate, combine, Criticize, Predict, Convince.

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)							
S. No.	**Cos**	**K Level**	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding& Implementation**	**Debugging & Output**
1	**CO1**	**K1**	15				
2	**CO2**	**K2**		15			
3	**CO3**	**K3**			15		
4	**CO4**	**K3**				15	
5	**CO5**	**K4**					15
Question Pattern		**No. of Questions to be asked**	2	2	2	2	2
		No. of Questions to be answered	2	2	2	2	2
		Marks for each question	7.5	7.5	7.5	7.5	7.5
		Total Marks for each section	15	15	15	15	15

Distribution of Marks with K Level								
K Level	**Syntax & Semantics**	**Programming principles**	**Concept Applications**	**Coding**	**Debugging & Output**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	15					**15**	**20**	**20**
K2		15				**15**	**20**	**20**
K3			15	15		30	40	40
K4					15	15	20	20
Marks	**15**	**15**	**15**	**15**	**15**	**75**	**100**	**100**
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels.								

Course Name	Extension Activity			
Course Code	24PEXTG41	**L**	**P**	**C**
Category	Mandatory Course	-	-	1

COURSE OBJECTIVES:

- To enable students to conduct outreach programs in schools to support the academic growth of children through interactive and engaging learning methods.
- To develop soft skills in children by organizing workshops and activities that enhance communication, teamwork, and critical thinking.
- To instill essential life skills and promote financial literacy among school children through interactive sessions and age-appropriate learning tools.
- To equip villagers with essential life skills, promote financial literacy, and inspire sustainable community development through participatory village activities
- To enable students to assess the impact of these schemes on target communities through practical field studies and data analysis

UNIT - I Engaging with School Students through Skill Development 9

- **Participatory Teaching and Learning (Class I to VIII):**
  Encourage interactive learning through activity-based methods such as storytelling, role play, and games to develop critical thinking and creativity in children.
- **Basic Financial Literacy for School Children:**
  Introduce concepts like saving, budgeting, and managing money to help children develop an understanding of financial responsibility at a young age.
- **Digital Awareness and Safety Practices:**
  Educate students about responsible internet usage, cyber safety, and the importance of digital literacy in today's world.
- **Value-Based Education and Life Skills:**
  Impart values such as empathy, teamwork, and decision-making through engaging classroom activities that prepare students for real-life situations.

UNIT - II Enhancing Communication Skills of School Students 8

- **Communication Skills – Reading, Writing, and Listening:**
  Focus on improving basic communication skills through interactive sessions and workshops.
- **Group Discussion and Presentation Skills:**
  Engage students in group discussions and oral presentations to enhance their confidence and public speaking abilities.
- **Soft Skill Development for School Children:**
  Develop essential soft skills such as leadership, teamwork, and time management to empower students with practical skills.

UNIT - III	Entrepreneurial Skills and Practical Exposure	8

- **Introduction to Entrepreneurship for Young Minds:**
  Familiarize students with the concept of entrepreneurship and inspire them to think creatively.
- **Hands-on Training and Free Government Schemes:**
  Provide practical exposure to various entrepreneurial activities and introduce government schemes that support budding entrepreneurs.
- **Skill Development for Women Empowerment:**
  Conduct sessions to enhance the entrepreneurial and work-life balance skills of women in the community.

UNIT - IV	Village Activities and Community Empowerment	3

- **Work-Life Balance and Stress Management:**
  Educate villagers on maintaining a healthy work-life balance and stress management techniques.
- **Skill Impact Assessment through Field Study:**
  Conduct a study to analyze the impact of skill development activities on village communities and suggest ways for improvement.

UNIT - V	Indian State and Central Government Schemes and Impact Assessment	2

Introduction to Government Welfare Schemes:
Educate the community about various state and central government schemes designed to promote education, skill development, and entrepreneurship.

Total Lecture Hours	30

BOOKS FOR STUDY:

- **Education and Social Change in India"** – M.S. Gore
  (Covers the role of education in societal transformation and skill development.)
- **"Soft Skills: Enhancing Employability"** – M. S. Rao
  (Provides insights into communication and interpersonal skills for students.)
- **"Financial Literacy and Education"** – K.C. Chakrabarty
  (Introduces financial concepts in a simplified manner for young learners.)
- **"Entrepreneurship Development"** – S.S. Khanka
  (Explains the basics of entrepreneurship, including government schemes.)
- **"Rural Development: Principles, Policies, and Management"** – Katar Singh
  (Covers community engagement and skill development for rural areas.)

BOOKS FOR REFERENCES:

- **Educational Psychology"** – S.K. Mangal
  (Discusses student behavior, learning strategies, and engagement techniques.)
- **"Developing Soft Skills"** – Mitra K. Barun
  (Covers personality development, teamwork, and leadership skills.)
- **"Financial Education for Youth"** – RBI Publications
  (Guidelines and materials for financial literacy among school children.)
- **"Community Organization and Development"** – Ross Murray & Tata Institute of Social Sciences
  (Provides practical strategies for participatory development.)

- **"Digital Citizenship and Internet Safety"** – Rajiv Sinha
  (Teaches responsible online behavior and cyber safety.)

WEB RESOURCES:

- **National Digital Library of India (NDLI)** – https://ndl.iitkgp.ac.in
  (Access academic resources on education, financial literacy, and entrepreneurship.)
- **Reserve Bank of India - Financial Literacy Initiatives** – **https://www.rbi.org.in**
  (Provides educational content on banking, financial management, and savings.)
- **NCERT Official Website** – https://ncert.nic.in
  (Download free textbooks and resources on value education and soft skills.)
- **Ministry of Skill Development & Entrepreneurship** – **https://www.msde.gov.in**
  (Updates on government skill development programs for students.)
- **SWAYAM Online Courses** – **https://swayam.gov.in**
  (Offers free courses on communication, entrepreneurship, and community development.)

Nature of Course	EMPLOYABILITY		SKILL ORIENTED	✓	ENTREPRENEURSHIP			
Curriculum Relevance	LOCAL		REGIONAL		NATIONAL		GLOBAL	✓
Changes Made in the Course	Percentage of Change		No Changes Made		New Course	✓		

***Treat 20% as each unit (20*5=100%) and calculate the percentage of change for the course.**

COURSE OUTCOMES:		**K LEVEL**
After studying this course, the students will be able to:		
CO1	Equip school students with essential skills through interactive learning.	**K1 to K5**
CO2	Enhance students' communication abilities for better expression and confidence.	**K1 to K5**
CO3	Foster entrepreneurial mindset and practical knowledge among learners.	**K1 to K5**
CO4	Strengthen village communities through impactful activities and engagement.	**K1 to K5**
CO5	Evaluate the effectiveness of Indian State and Central Government schemes.	**K1 to K5**

MAPPING WITH PROGRAM OUTCOMES:

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	S	S	M					
CO2	S	S	S	M	S					
CO3	S	M	S	S	S					
CO4	S	S	S	S	S					
CO5	S	S	M	S	S					

S -STRONG **M – MEDIUM** **L – LOW**

CO / PO MAPPING:						
COS	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**
CO 1	**2**	**2**	**1**	**2**	**2**	**2**
CO 2	**3**	**3**	**2**	**3**	**3**	**3**
CO 3	**3**	**3**	**2**	**3**	**3**	**3**
CO 4	**3**	**2**	**2**	**2**	**3**	**3**
CO 5	**3**	**2**	**2**	**3**	**3**	**3**
WEITAGE						
WEIGHTED PERCENTAGE OF COURSE CONTRIBUTION TO POS						

Learning Outcome Based Education & Assessment (LOBE) Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Attendance**	**Report writing**	**Content Clarity**	**Communication**	**Presentation**
CIA	**CO1**	**K1**	**5**				
	CO2	**K2**		**5**			
	CO3	**K3**			**5**		
	CO4	**K4**				**5**	
	CO5	**K5**					**5**
Question Pattern CIA	No. of Questions to be asked		**1**	**1**	**1**	**1**	**1**
	No. of Questions to be answered		**1**	**1**	**1**	**1**	**1**
	Marks for each question		**5**	**5**	**5**	**5**	**5**

Distribution of Marks with K Level CIA									
	K Level	**Attendance**	**Report writing**	**Content Clarity**	**Communication**	**Presentation**		**% of (Marks without choice)**	**Consolidate of %**
CIA	**K1**	5					5	20	20
	K2		5				5	20	20
	K3			5			5	20	20
	K4				5		5	20	20
	K5					5	5	20	20
	Marks	**5**	**5**	**5**	**5**	**5**	25	100	100

K1- Remembering and recalling facts with specific answers
K2- Basic understanding of facts and stating main ideas with general answers
K3- Application oriented- Solving Problems
K4- Examining, analyzing, presentation and make inferences with evidences
K5 –Evaluate, combine, Criticize, Predict, Convince

CO5 will be allotted for individual Assignment which carries five marks as part of CIA component.

Summative Examination – Blue Print Articulation Mapping – K Level with Course Outcomes (COs)							
Internal	**Cos**	**K Level**	**Attendance**	**Report writing**	**Content Clarity**	**Commnication**	**Presentation**
CIA	**CO1**	**K1**	**15**				
	CO2	**K2**		**15**			
	CO3	**K3**			**15**		
	CO4	**K4**				**15**	
	CO5	**K5**					**15**
Question Pattern CIA		No. of Questions to be asked	**3**	**3**	**3**	**3**	**3**
		No. of Questions to be answered	**3**	**3**	**3**	**3**	**3**
		Marks for each question	**5**	**5**	**5**	**5**	**5**
		Total Marks for each section	**15**	**15**	**15**	**15**	**15**

Distribution of Marks with K Level CIA									
	K Level	**Attendance**	**Report writing**	**Content Clarity**	**Comm unication**	**Present ation**		**% of (Marks without choice)**	**Consolidate of %**
CIA	**K1**	15					15	20	20
	K2		15				15	20	20
	K3			15			15	20	50
	K4				15		15	20	20
	K5					15	15	20	20
	Marks						75	100	100