M.COM., CA

Syllabus

Program Code: PCC

2021-2022 onwards

MANNAR THIRUMALAI NAICKER COLLEGE

(AUTONOMOUS)

Re-accredited with "A" Grade by NAAC

PASUMALAI, MADURAI – 625 004

Eligibility

Admission for M.Com (CA) Program is open to the candidates having Bachelor Degree in B.Com (CA), B.Com, Management, Corporate Secretarial ship and other related program of any recognized university.

Duration of the Course

The duration of the course shall be two academic year comprising four semesters with two semesters in each academic year.

Subjects of Study

The courses offered under the PG programs belong to the following categories:

1. Core Subjects
2. Electives
3. Non Major Electives (NME)

Pattern of the question paper for the Continuous Internal Assessment
Note: Duration – 1 hour 30 minutes

The components for continuous internal assessment are:

Part –A
Four multiple choice questions (answer all) 4 x01= 04 Marks
Part –B
Three short answers questions (answer all) 3 x02= 06 Marks
Part –C
Two questions (‘either …. or ‘type) 2 x 05=10 Marks
Part –D
Two questions out of three 2 x 10 =20 Marks

Total 40 Marks

The scheme of Examinations

The components for continuous internal assessment are:
(40 Marks of two continuous internal assessments will be converted to 15 marks)

Two tests and their average --15 marks
Seminar /Group discussion --5 marks
Assignment --5 marks

Total 25 Marks

Pattern of the question paper for the Summative Examinations:

Note: Duration- 3 hours

Part –A

Ten multiple choice questions	10 x01	= 10 Marks

No Unit shall be omitted: not more than two questions from each unit.)

Part –B

Short answer questions (one question from each unit)	5 x02	= 10 Marks

Part –C

Five Paragraph questions (‘either …. or ‘type)	5 x 05	= 25 Marks

(One question from each Unit)

Part –D

Three Essay questions out of five	3 x 10	=30 Marks

(One question from each Unit)

Total 75 Marks

Minimum Marks for a Pass

50% of the aggregate (Internal +Summative Examinations).

No separate pass minimum for the Internal Examinations.

34 marks out of 75 is the pass minimum for the Summative Examinations.

VISION

To promote the department of commerce as a "Research Centre with Excellence" in Commerce and create the Professionals with Ethical values

MISSION

- To achieve academic excellence by providing knowledge about contemporary aspects in commerce education
- To equip the students to emerge as an efficient and ethical Business Consultants, Chartered Accountants and Business Managers
- To establish an industry-academia interface for generating advanced opportunities for the students
- To create an urge in students to take up entrepreneurship
- To involve in projects leading to high-quality research

The 12 Graduate Attributes*:

1. (KB) A knowledge base for engineering: Demonstrated competence in university level mathematics, natural sciences, engineering fundamentals, and specialized engineering knowledge appropriate to the program.
2. (PA) Problem analysis: An ability to use appropriate knowledge and skills to identify, formulate, analyze, and solve complex engineering problems in order to reach substantiated conclusions
3. (Inv.) Investigation: An ability to conduct investigations of complex problems by methods that include appropriate experiments, analysis and interpretation of data and synthesis of information in order to reach valid conclusions.
4. (Des.) Design: An ability to design solutions for complex, open-ended engineering problems and to design systems, components or processes that meet specified needs with appropriate attention to health and safety risks, applicable standards, and economic, environmental, cultural and societal considerations.
5. (Tools) Use of engineering tools: An ability to create, select, apply, adapt, and extend appropriate techniques, resources, and modern engineering tools to a range of engineering activities, from simple to complex, with an understanding of the associated limitations.
6. (Team) Individual and teamwork: An ability to work effectively as a member and leader in teams, preferably in a multi-disciplinary setting.
7. (Comm.) Communication skills: An ability to communicate complex engineering concepts within the profession and with society at large. Such ability includes reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.

8. (Prof.) Professionalism: An understanding of the roles and responsibilities of the professional engineer in society, especially the primary role of protection of the public and the public interest.
9. (Impacts) Impact of engineering on society and the environment: An ability to analyze social and environmental aspects of engineering activities. Such ability includes an understanding of the interactions that engineering has with the economic, social, health, safety, legal, and cultural aspects of society, the uncertainties in the prediction of such interactions; and the concepts of sustainable design and development and environmental stewardship.
10. (Ethics) Ethics and equity: An ability to apply professional ethics, accountability, and equity.
11. (Econ.) Economics and project management: An ability to appropriately incorporate economics and business practices including project, risk, and change management into the practice of engineering and to understand their limitations.
12. (LL) Life-long learning: An ability to identify and to address their own educational needs in a changing world in ways sufficient to maintain their competence and to allow them to contribute to the advancement of knowledge

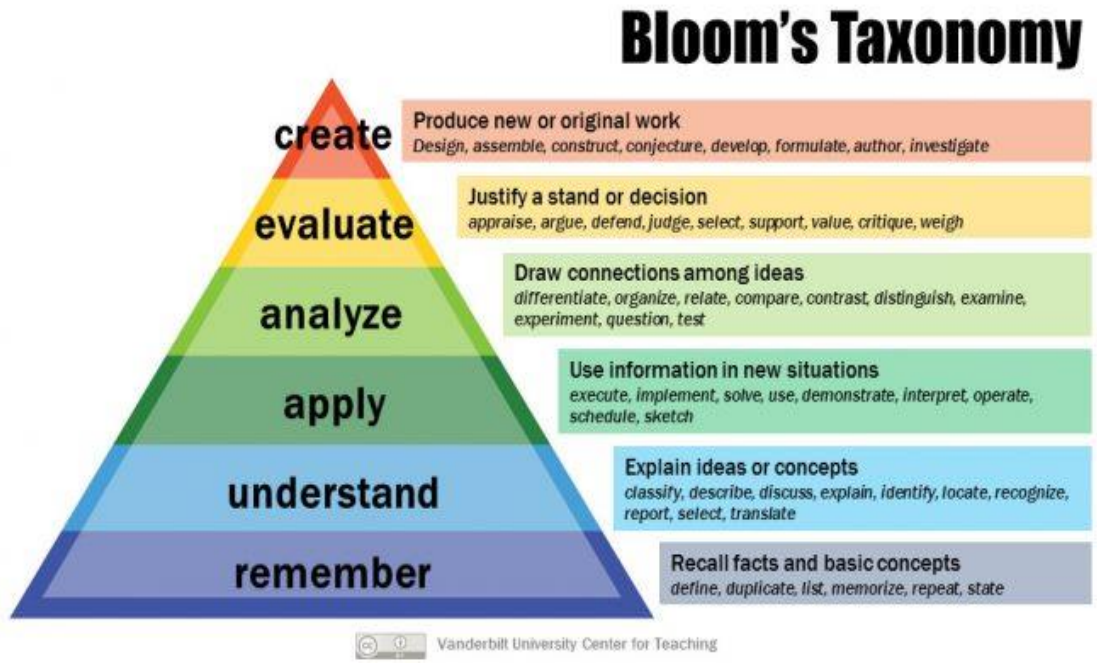
WA	Graduate Attributes	Caption as
1	A knowledge base for engineering: Demonstrated competence in university level mathematics, natural sciences, engineering fundamentals, and specialized engineering knowledge appropriate to the program.	Knowledge Base
2&3	Problem analysis: An ability to use appropriate knowledge and skills to identify, formulate, analyze, and solve complex engineering problems in order to reach substantiated conclusions Investigation: An ability to conduct investigations of complex problems by methods that include appropriate experiments, analysis and interpretation of data and synthesis of information in order to reach valid conclusions.	Problem Analysis & Investigation
4&7	Design: An ability to design solutions for complex, open-ended engineering problems and to design systems, components or processes that meet specified needs with appropriate attention to health and safety risks, applicable standards, and economic, environmental, cultural and societal considerations. Communication skills: An ability to communicate complex engineering concepts within the profession and with society at large. Such ability includes reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.	Communication Skills & Design
6	Individual and teamwork: An ability to work effectively as a member and leader in teams, preferably in a multi-disciplinary setting.	Individual and Team Work
8&10	Professionalism: An understanding of the roles and responsibilities of the professional engineer in society, especially the primary role of protection of the public and the public interest. Ethics and equity: An ability to apply professional ethics,	Professionalism, Ethics and equity

	accountability, and equity.	
12	Life-long learning: An ability to identify and to address their own educational needs in a changing world in ways sufficient to maintain their competence and to allow them to contribute to the advancement of knowledge	Lifelong learning

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)	
PEO1:	Toacquireentrepreneurialandmanagerialskillstobecomeasuccessfulentrepreneurof Micro to Large scale industries.
PEO2:	Tocultivatethestudentsinintellectual,personal,interpersonalandsocietalskillswitha Focus on relevant professional career to maximize professional growth.
PEO3:	To acquire practical skills to work on ICT environment.
PEO4:	To Train and develop students with the much needed business education to take up higher Education and professional/competitive exams.
PEO5:	To transform the student into ethically & socially responsible professionals through Excellence.
PEO6:	To involve in continuous learning process for attaining economic goals of self, family and society

PO NO	**PROGRAMME OUTCOMES (POs)**	
At the end of the programme, the students will be able to		
PO – 1	Integrate the academic abilities and expertise gained from the study of humanities and arts and other similar fields, and gains requisite scope and breadth for a transdisciplinary context.	**Knowledge Base**
PO – 2	Demonstrate proficiency in the use of effective disciplinary techniques in research, critical study, artistic work and professional performance.	**Problem Analysis & Investigation**
PO – 3	Communicate observations, recommendations and suggestions effectively, concisely and accurately, both verbally and in writing, to various types of audiences.	**Communication Skills & Design**
PO - 4	Articulate and apply principles, concepts, ethics and ideals resulting from an integrated view of their fields of research and to show knowledge and resolution of existing social and environmental issues.	**Individual and Team Work**
PO - 5	Apply professional ethics, accountability and equity in all their endeavours.	**Professionalism, Ethics and Equity**
PO - 6	Use new tools, resources and technology to keep abreast with current developments in their discipline and practice life-long learning.	**Lifelong learning**

PROGRAM SPECIFIC OUTCOME (PSOs)	
PSO1:	Comprehend the concepts and applications of commerce in the areas related to Finance, Marketing, entrepreneurship, HR, Logistics and supply chain etc.,
PSO2:	Apply the learning from the courses and develop strategies for business issues.
PSO3:	Utilize the advanced developments by using modern techniques such as Tally ERP and SPSS for growth and development of organization as well as nation.
PSO4:	Competent to pursue CA, CS, CFA, CMA, B.Ed. Ph.D and also can appear on National And State Eligibility Test.
PSO5:	Analyze and evaluate the operation of the business related issues and Communicate Professionally and face challenges ethically with concern to social welfare
PSO6:	Excel in contemporary knowledge of business and provide to the manpower needs of companies.



MANNAR THIRUMALAI NAICKER COLLEGE (Autonomous),
Pasumalai
M.Com.,CA., Curriculum
(For the student admitted during the academic year 2021-2022 onwards)

Course Code	Title of the Course	Hrs	Credits	Maximum Marks		
				Int	Ext	Total
FIRST SEMESTER						
PART - III	**Core Courses**					
21PCCC11	Advanced Financial Accounting	6	4	25	75	100
21PCCC12	Tally ERP 9	6	4	25	75	100
21PCCC13	Quantitative Methods	6	4	25	75	100
21PCCC14	Security Analysis And Portfolio Management	6	4	25	75	100
21PCCC15	Insurance And Risk Management	6	4	25	75	100
	Total	**30**	**20**	**125**	**375**	**500**
SECOND SEMESTER						
Part - III	**Core Courses**					
21PCCC21	Applied Costing	6	4	25	75	100
21PCCC22	Business Research Methods	6	4	25	75	100
21PCCC23	Applied Operations Research	6	4	25	75	100
21PCCC24	Applied E-Commerce	6	4	25	75	100
Part IV	**Non Major Elective Course**					
21PCCNP1	Advanced Excel - Lab	6	6	40	60	100
	Total	**30**	**22**	**140**	**360**	**500**

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THIRD SEMESTER						
Part - III	**Core Courses**					
21PCCC31	Advanced Corporate Accounting	6	4	25	75	100
21PCCC32	Accounting for Management	6	4	25	75	100
21PCCC33	Direct Taxes	6	4	25	75	100
	Elective 1					
21PCCE31 21PCCE32 21PCCE33	Programming in Python Programming with PHP Visual Programming	6	6	25	75	100
	Elective 2					
21PCCEP1 21PCCEP2 21PCCEP3	Programming in Python – Lab Programming with PHP – Lab Visual Programming - Lab	6	6	40	60	100
	Total	**30**	**24**	**140**	**360**	**500**
FOURTH SEMESTER						
Part - III	**Core Courses**					
21PCCC41	Indirect Tax	6	4	25	75	100
21PCCC42	Advanced Financial Management	6	4	25	75	100
21PCCPR1	Project	6	4	40	60	100
	Elective 3					
21PCCE41 21PCCE42 21PCCE43	Database Management System Web Technology Programming in Vb.Net	6	6	25	75	100
	Elective 4					
21PCCEP4 21PCCEP5 21PCCEP6	Database Management System-Lab Web Technology Lab Programming in Vb.Net-Lab	6	6	40	60	100
	Total	**30**	**24**	**155**	**345**	**500**
	Grand Total	**120**	**90**	**560**	**1440**	**2000**


FIRST SEMESTER

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**Advanced Financial Accounting**				
Course Code	**21PCCC11**			**L**	**P**	**C**
Category	Core			6	-	4
Nature of Course	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENEURSHIP	

Course Objectives:

1. Familiarize with the fundamental aspects of financial accounting standards.
2. Prepare income and expenditure accounts and balance sheets of non-trading concerns.
3. Prepare the branch accounts and departmental accounts.
4. Accumulate knowledge and accounting skills required for calculating loss of stock and loss of profit.
5. To inculcate skills in preparing their application to lease accounting and human resource accounting.

Unit: I	**Accounting Standards**	18

Indian and International Accounting Standards – Accounting Standards 2,3,6,9,10,16 and Ind As 1,2,7,16,19,23 and An overview of IFRS- Application – Scope – Formulation – Advantages – Disadvantages -Theory only.

Unit: II	**Accounting of Not for Profit Organization**	18

Introduction –Final accounts of Not for Profit Organization –Receipts and Payments-Income and Expenditure Account and Balance Sheet.

Unit: III	**Branch and Departmental Accounts.-Hire purchase and installment purchase systems**	18

Branch Accounts-Meaning- objectives –Types of Branches- Accounting methods- Departmental Accounts- Meaning of departmental accounting-need for departmental accounting –Accounting methods-hire Purchase System- Meaning- Accounting treatment for hire purchase system – Installment System – Meaning Accounting treatment for installment .

Unit: IV	**Insurance Claims**	18

Meaning– Need – Importance of Insurance Claim – Loss of profit Policy - Difference between Fire Insurance Policy and Loss of Profit Policy – Computation of claim for Loss of Profit Policy — Loss of Stock Policy - Average clause.

Unit: V	**Lease Accounting**	18

Meaning- Important Features of a lease –Types-Advantages and Disadvantages-Lease distinguished from other modes of acquisitions- Methods of Accounting Treatment – simple problem - Inflation Accounting-Human Resources Accounting - Social Accounting -theory only.

	Total Hours	90

(80% of marks must be allotted to problem solving questions. 20% of marks must be allotted to Theory questions).

Book for study:

1. T.S.Reddy and A.Murthy, Corporate Accounting, Margham Publications, Chennai, 2018.
2. 5. R.S.N. Pillai, Bagavathi & S. Uma, ***"Fundamentals of Advanced Accountancy",*** Third Edition, 2015, Sultan Chand, New Delhi.

Books for Reference:

1. M.A.Arulanandam & K.S. Raman, "***Advanced Accountancy"*** Vol-I, Sixth Edition, 2015, Himalaya Publishing House, Mumbai.
2. S.P.Jain and K.L. Narang, Advanced Accountancy -II, Kalyani Publishers, New Delhi, 2014.
3. R.L.Gupta and M.Radaswamy, Corporate Accounting, Sultan Chand Publisher, Kolkatta,2013
4. .S. N. Maheshwari & Suneel K Maheshwari, ***"Financial Accounting",*** Fifth Edition, 2012, Vikas Publishing House.

Web Resources:

1. www.jstor.org

COURSE OUTCOME		K Level
After the completion of the course the student will be able to,		
CO1	Understand the principles, procedure accounting standards	**Up to k3**
CO2	Prepare accounts for non-trading concern.	**Up to k3**
CO3	Create branch and departmental accounts	**Up to k5**
CO4	Calculate insurance claims	**Up to k4**
CO5	Construct Lease accounting.	**Up to k5**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**2**	**2**	**1**	**3**	**2**
CO 2	**3**	**3**	**3**	**3**	**2**	**3**
CO 3	**3**	**3**	**3**	**3**	**2**	**3**
CO 4	**3**	**3**	**3**	**3**	**2**	**3**
CO 5	**2**	**3**	**3**	**3**	**3**	**3**
Weightage	**14**	**14**	**14**	**13**	**12**	**14**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	Hrs	Mode
I	**Accounting Standards** Indian and International Accounting Standards – Accounting Standards 2,3,6,9,10,16 and IND As 1,2,7,16,19,23 and An overview of IFRS-	18	L/Chalk and Talk
II	**Accounting of Not for -Profit Organization** Final accounts of Not for Profit Organization –Receipts and Payments- Income and Expenditure Account and Balance Sheet.	18	L/Chalk and Talk
III	**Branch and Departmental Accounts.-Hire purchase and installment purchase systems** Branch Accounts - Departmental Accounts- –Accounting methods- hire Purchase System- Accounting treatment for hire purchase system – Installment System	18	L/Chalk and Talk
IV	**Insurance Claims** Meaning– Need – Importance of Insurance Claim – Loss of profit Policy - Difference between Fire Insurance Policy and Loss of Profit Policy – Computation of claim for Loss of Profit Policy — Loss of Stock Policy - Average clause.	18	L/Chalk and Talk
V	**Lease Accounting** Lease Accounting Methods of Accounting Treatment Inflation Accounting- Human Resources Accounting - Social Accounting	18	L/Chalk and Talk

Course designed by:

1. **Dr. V. Suresh Babu,** Assistant Professor.
2. 2. **Dr. S. Ganesan**, Assistant Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIA I	**CO1**	Up to K3	2	K1,K2	1	K1	2(K2&K2)	1(K3)
	CO2	Up to K3	2	K1,K2	2	K2	2(K3&K3)	1 (K2)
CIA II	**CO3**	Up to K5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	Up to K4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marks for each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIA II	**K1**	2	2	-	-	4	8	20
	K2	2	4	-	-	6	12	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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**	**MCQs**		**Short Answers**		**Section C (Either / or Choice)**	**Section D (Open Choice)**
			No. of Questions	**K – Level**	**No. of Question**	**K – Level**		
1	**CO1**	Up tok3	2	K1,K2	1	K1	2(K2&K3)	1(K2)
2	**CO2**	Up tok3	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K3)
4	**CO4**	Up to k4	2	K1,K2	1	K2	2(K3&K3)	1(K4)
5	**CO5**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1(K5)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	1	-	-	7	5.83	**29**
K2	5	4	1	1	28	23.33	
K3	-	-	5	3	55	45.84	**46**
K4	-	-	4	1	30	25	**25**
Marks	**10**	**10**	**50**	**50**	**120**	**100**	**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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K3	
19) b	CO4	K4	
20) a	CO5	K3	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	**K2**	
22	CO2	**K3**	
23	CO3	**K3**	
24	CO4	**K4**	
25	CO5	**K5**	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**TALLY ERP 9**			
Course Code	**21PCCC12**	**L**	**P**	**C**
Category	**Part III - Core**	6	-	4

Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENEURSHIP

Course Objectives:

1. To impart knowledge regarding concepts of Financial Accounting.
2. To introduce the Basics of Accountancy and the usage of Tally for accounting purpose
3. To learn its principles, concepts, conventions, recording procedures, Bank reconciliation, final accounts etc.
4. To make students equipped with essential skill for employability in the job market.
5. To practice Computerised Accounting Systems using Tally.ERP.9

Unit: I	**Fundamentals of Tally ERP 9:**	**15**

Introduction- Getting started with Tally ERP.9 – Mouse / Keyboard Conventions – Closing Tally.ERP 9 – Creating a company - Features and configurations.

Unit: II	**Ledgers ,Groups and Vouchers :**	**15**

Ledger Creation - Multi Ledger creation – Altering and Displaying Ledgers – Deleting Ledgers – Group Creation – Altering Groups – Deleting Groups – Inventory Master Creation –Voucher Entry.

Unit: III	**Accounting Reports:**	**15**

Basic features of displaying reports – Financial statements – Banking – Cost centre and Cost categories – Order Processing – Data Backup and restore.

Unit: IV		**15**

TDS: Introduction - Basic concepts of TDS – TDS in Tally.ERP 9 – TDS reports – E-Filing TDS returns.

Advanced features of Tally ERP 9: E-mailing in Tally ERP.9 – E-mailing a report – Benefits – Export and import of data.

Unit: V	**Goods and Services Tax:**	**15**

Introduction – Transferring Input Tax credit to GST – Interstate supply of Goods –Return of Goods – GST Reports – GST Tax Payment – Exempted Goods/Services.

	Total Lecture Hours	75

Books for Study:

1. Tally Education Private Limited, **Official Guide to Financial Accounting with Tally ERP 9,** BPB publications, New Delhi, Fourth Edition, 2018.

Books for References:

1. Nadhani, **Tally ERP 9 Training Guide,** BPB Publications ,New Delhi, 2009.
2. P.Rizwar Ahmed , **Computer Applications In Business With Tally ERP 9**, Margham Publications,Chennai- First Edition, 2017.

Course Outcomes		K Level
After the completion of the course the student will be able to,		
CO1:	Learn the ideas and practices about Tally	Up To K2
CO2:	Develop computer skills and research of annual accounts and reports using Tally	Up To K3
CO3:	Apply the proficiency as Tally data entry operator.	Up To K3
CO4:	Analyze the deepness and professional knowledge of Tally course	Up To K4
CO5:	Create own company, enter accounting voucher entries including advance voucher entries, and reconcile bank statement	Up To K2

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	3	2	2	2	3
CO 2	3	3	3	1	3	2
CO 3	3	2	2	3	3	3
CO 4	1	3	2	3	3	3
CO 5	2	3	3	3	3	3

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	HOURS	PEDAGOGY
UNIT - I	**Fundamentals of Tally ERP 9:** Introduction- Getting started with Tally ERP.9	5	PPT, Practical Demonstration
	Mouse / Keyboard Conventions	3	
	Closing Tally.ERP 9 – Creating a company	2	
	Features and configurations	5	
UNIT - II	**Ledgers ,Groups and Vouchers :** Ledger Creation - Multi Ledger creation	5	Chalk & Talk, Exercise
	Altering and Displaying Ledgers – Deleting Ledgers	3	
	Group Creation – Altering Groups – Deleting Groups	2	
	Inventory Master Creation –Voucher Entry.	5	
UNIT - III	**Accounting Reports:** Basic features of displaying reports – Financial statements	5	Quiz Program, PPT
	Banking – Cost centre and Cost categories	5	
	Order Processing – Data Backup and restore.	5	
UNIT - IV	**TDS:** Introduction - Basic concepts of TDS – TDS in Tally.ERP 9	5	Chalk & Talk, PPT
	TDS reports – E-Filing TDS returns.	5	
	Advanced features of Tally ERP 9: E-mailing in Tally ERP.9 – E-mailing a report – Benefits – Export and import of data	5	
UNIT - V	**Goods and Services Tax:** Introduction – Transferring Input Tax credit to GST	5	Group Discussion, Exercise
	Interstate supply of Goods –Return of Goods – GST Reports	5	
	GST Tax Payment – Exempted Goods/Services	5	

Course designed by:

1. **Mrs.A.Nagaswathy,** Assistant Professor.
2. 2. **Mrs.M.Muthulakshmi**, Assistant Professor.

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		Section C Either or Choice	Section D Open Choice
			MCQs		Short Answers			
			No. of. Questions	K - Level	No. of. Questions	K - Level		
CI AI	CO1	Up tok3	2	K1,K2	1	K1	2(K2&K2)	1(K3)
	CO2	Up tok3	2	K1,K2	2	K2	2(K3&K3)	1 (K3)
CI AII	CO3	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	Up to k4	2	K1,K2	2	K2	2(K3&K3)	1 (K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marks for each section	**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I & CIA II

	K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either / Or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidate of %
CIA I	K1	2	2	-	-	4	8	40
	K2	2	4	10	-	16	32	
	K3	-	-	10	20	30	60	60
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIA II	K1	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	30	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	Up tok3	2	K1,K2	1	K1	2(K2&K2)	1(K2)
2	**CO2**	Up tok3	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
4	**CO4**	Up to k4	2	K1,K2	1	K2	2(K3&K3)	1(K3)
5	**CO5**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K4)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	29
K2	5	4	1	1	28	23.33	
K3	-	-	5	3	55	45.84	46
K4	-	-	4	1	30	25	25
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K3	
19) b	CO4	K4	
20) a	CO5	K3	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K3	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**QUANTITATIVE METHODS**				
Course Code	**21PCCC13**		**L**	**P**	**C**
Category	**Core**		6	-	4
Nature of Course	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENEURSHIP		

Course Objectives:

1. To enable the students to apply the statistical tools in analysis and interpretation of data.
2. To impart knowledge on extrapolation and interpolation. Polynomial interpolation is a method of estimating values between known data points.
3. To teach probability, theoretical probability distribution and probability distribution of random variable in the three important interrelated trades which going to learn.
4. To analyze the statistical tools using SPSS software package.
5. To apply inferential statistical analysis to draw conclusions about an entire population based on a representative sample.

Unit: I	**Correlation**	**18**

Correlation – Types of correlation – Karl Pearson's Co – efficient of correlation -Partial and Multiple correlations – Spearman's rank Correlation – Regression Analysis – Regression Lines and regression Co – efficient -Multiple.

Unit: II	**Interpolation and extrapolation**	**18**

Interpolation and Extrapolation – Methods of Interpolation – Binomial Expansion Method – Newton's Method – Lagrange's Method – Parabolic Curve Method – Extrapolation – Vital Statistics – Life Tables.

Unit: III	**Probability and distribution**	**18**

Probability – Problems applying Additional and Multiplication Theorem – Mathematical Expectations – Theoretical Distributions – Binomial – Poisson – Normal Distribution.

Unit: IV	**Hypothesis Testing**	**18**

Procedure for Hypothesis Testing – One tailed and Two Tailed Test – Large Sample tests for means and standard deviations – Small sample tests (t- test) – F test and Analysis of Variance (ANOVA). Chi-square test – Sign test – Man Whitney U test – Kruskal Wallis test.

Unit: V	**Data Analysis through Statistical Package**	**18**

Introduction to SPSS Package – Procedure for Statistical analysis in SPSS – Descriptive –Mean – Median- Mode and Standard deviation – Chi square test – Correlation – Regression – Analysis of Variance.

	Total Hours	**90**

Book for study:

1. S. P. Gupta, *Statistical Methods*, Sultan Chand and Sons, New Delhi, 2014.

Books for Reference:

1. R.S.N. Pillai, Bhagavathi, *Statistics – Theory and Practice,* S. Chand Publication, New Delhi, 2016.
2. C. B. Gupta and Vijay Gupta, *An Introduction to Statistical Methods,* Vikas Publishing House, India, 2004

Web Resources:

1. https://nptel.ac.in/courses/111/105/111105041/
2. http://ndl.iitkgp.ac.in/document/MDl5cHdNUUlnd0lnZHNoQXlvOG5lRUcyRDVyYTRabnR3NGFLYXo1dTBRST0
3. http://ndl.iitkgp.ac.in/document/OEYweXpIRmlkYURkM3JkbUdtKy9UWit4Y3NtOXdKKy9HQk1pU010UzF3bVJSRzNIdXVoWEpLQzJoSTlQcWF3K0V0MXFTU1plMmhRbXZHd3ZESzFRQ0E9PQ
4. http://ndl.iitkgp.ac.in/document/WEtvZWhwaDFwSG04NzJ5eWRRdTFEQzZJSHVjOVhGQ2VMYjhBdmNKa29oOD0
5. http://ndl.iitkgp.ac.in/document/ZGRZQjU5TzROQmFHNlNnN1FQRmdRMSt0SU9aMjJsbUpwcm56TVd3SUNCbz0

Course Outcomes:		K Level
After the completion of the course the student will be able to,		
CO1:	Understand the application of Correlation and Regression.	Up to K4
CO2:	Apply extrapolation and interpolation statistical method to predict values in relation to the data.	Up to K3
CO3:	Solve the problems related to probability	Up to K3
CO4:	Test hypothesis to assess the plausibility of a hypothesis by using sample data in Business Research	Up to K5
CO5:	Do statistical analysis using SPSS	Up to K3

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	3	3	2	3	3
CO 2	3	3	3	3	2	2
CO 3	3	3	3	3	3	3
CO 4	3	3	3	2	3	3
CO 5	3	3	3	3	3	3

***3** – Advanced Application; **2** – Intermediate Development; **1** - Introductory Level

LESSON PLAN

UNIT	QUANTITATIVE METHODS	Hrs	Mode
I	**Correlation** Correlation –Karl Pearson's Co – efficient of correlation– Spearman's rank Correlation – Regression Analysis – Regression Lines and regression Co – efficient.	18	Chalk & Talk
II	**Interpolation and extrapolation** Interpolation and Extrapolation – Methods of Interpolation – Binomial Expansion Method – Newton's Method – Lagrange's Method – Parabolic Curve Method – Extrapolation – Vital Statistics – Life Tables.	18	Chalk & Talk
III	**Probability and distribution** Probability – Problems applying Additional and Multiplication Theorem – Mathematical Expectations – Theoretical Distributions – Binomial – Poisson – Normal Distribution.	18	Chalk & Talk
IV	**Hypothesis Testing** Procedure for Hypothesis Testing – One tailed and Two Tailed Test – Large Sample tests– Small sample tests – F test and Analysis of Variance. Chi- square test – Sign test – Man Whitney U test – Kruskal Wallis test.	18	Chalk & Talk
V	**Statistical Package** Introduction to SPSS Package – Procedure for Statistical analysis in SPSS – Descriptive– Chi square test – Correlation – Regression – Analysis of Variance	18	Chalk & Talk

Course Designated by: **Dr. R. Kajapriya**, Assistant Professor.

&

Dr. S. Venkateswaran, Head & Associate Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CI	**CO1**	**Up To K4**	2	K1,K2	1	K1	2(K4&K4)	1(K4)
AI	**CO2**	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	1 (K2)
CI	**CO3**	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	1 (K3)
AII	**CO4**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1(K5)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marks for each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Dist ibution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2	2	-	-	4	8	40
	K2	2	4	-	10	16	32	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIA II	**K1**	2	2	-	-	4	8	20
	K2	2	4	-	-	6	12	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	-	10	20	20
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K4**	2	K1,K2	1	K1	2(K4&K4)	1(K4)
2	**CO2**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1 (K2)
4	**CO4**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1(K5)
5	**CO5**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	25
K2	5	4	-	1	23	19.17	
K3	-	-	6	2	50	41.67	42
K4	-	-	4	1	30	25	25
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K4	
16) b	CO1	K4	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K3	
18) b	CO3	K3	
19) a	CO4	K4	
19) b	CO4	K5	
20) a	CO5	K3	
20) b	CO5	K3	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K4	
22	CO2	K3	
23	CO3	K2	
24	CO4	K5	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT**				
Course Code	**21PCCC14**		**L**	**P**	**C**
Category	**Core**		6	-	4
Nature of Course	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENEURSHIP		

Course Objectives:

1. To introduce the fundamental concepts of investment decision making.
2. To impart knowledge on the basics of measuring risk and return.
3. To develop the skills required to make portfolio decision making.
4. To teach the uses of CAPM and APM.
5. To apply tools for choosing best investment avenues.

Unit: I	**SECURITIES MARKET – AN OVERVIEW:**	18

Securities – Meaning – Types – Securities Markets – Participants of Securities Market - Organization and Structure of the Securities Market in India – Primary Market – Secondary Market – Derivatives market - Securities and Exchange Board of India (SEBI) - Investors Protection in the Primary and Secondary Market.

Unit: II	**SECURITY ANALYSIS:**	18

Fundamental Analysis - Economic analysis, Industry analysis and Company analysis, Technical analysis - Market indicators, forecasting individual stock performance - Valuation models of equity and bonds.

Unit: III	**PORTFOLIO ANALYSIS:**	18

Risk - Types and sources – Measurement of Return - Risk-Return Relationship - Random walk, Efficient market hypothesis, Strong, semi-strong and weak forms - Capital market theory three levels – the Elliott Wave principle – Efficient Portfolio – Efficient frontier.

Unit: IV	**PORTFOLIO SELECTION:**	18

Portfolio – Meaning, Types – Portfolio Management: Meaning, Need, Types and Importance – SEBI regulations – portfolio performance - portfolio theory, objectives, Markowitz portfolio analysis - Sharpe Index Model - Capital Asset Pricing Theory and Arbitrage Pricing Theory. Portfolio Evaluation – Process of evaluation – Portfolio Revision – The Formula Plans Rupee cost average – Constant Rupee value – Constant ratio and variable ratio plans.

Unit: V	**DERIVATIVES MARKET**	18

Meaning – Forward Contract – Futures Contract – Options Contract.

	Total Hours	90

Book for study

1. Punithavathy Pandian, Security analysis and Portfolio Management, Vikas Publishing House Private Ltd, New Delhi, 2013.

Books for Reference:

1. Balla, V.K., Fundamentals of Investment Management, S.Chand , Ram Nagar, New Delhi, 2006.
2. Avadhani, V.A, Investment & Security Markets in India, Himalaya Publishing House, Mumbai, 2016.
3. Prasanna Chandra, Investment Analysis and Portfolio Management, Mc-GrawHill Publications, 2017.

4. Kevin S, 'Security Analysis and Portfolio Management' Prentice Hall of India, New Delhi, 2011.
5. Gurusamy .S, 'Security Analysis and Portfolio Management', Vijay Nicole Imprints Ltd, 2017.

Web Resources:

1. https://play.google.com/store/apps/details?hl=en&id=com.mhrd.ndl

Course Outcomes		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand the structure and functions of securities market.	**Up To K3**
CO2	Analyze the securities by applying appropriate tools.	**Up To K3**
CO3	Discover the risk and return associated with the securities.	**Up To K4**
CO4	Examine the best model for portfolio selection	**Up To K5**
CO5	Understand the basic concepts of derivative markets	**Up To K4**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**2**	**2**	**2**	**2**	**2**
CO 2	**3**	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**
CO 4	**2**	**3**	**3**	**3**	**3**	**3**
CO 5	**2**	**2**	**2**	**3**	**3**	**3**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	SUBJECT NAME	Hrs	Mode
I	**SECURITIES MARKET** Securities –Participants of Securities Market - Organization and Structure of the Securities Market in India - Securities and Exchange Board of India - Investors Protection in the Primary and Secondary Market.	18	Lecture, PPT
II	**SECURITY ANALYSIS** Fundamental Analysis - Economic analysis, Industry analysis and Company analysis, Technical analysis - Market indicators, forecasting individual stock performance - Valuation models of equity and bonds.	18	Lecture, PPT
III	**PORTFOLIO ANALYSIS** Risk - Risk-Return Relationship - Random walk, Efficient market hypothesis, Strong, semi-strong and weak forms - Capital market theory three levels	18	Lecture, PPT
IV	**PORTFOLIO SELECTION AND EVALUATION** Portfolio –Portfolio Management – SEBI regulations – portfolio performance - portfolio theory, Markowitz portfolio analysis - Sharpe Index Model - Capital Asset Pricing Theory and Arbitrage Pricing Theory. Portfolio Evaluation – Process of evaluation – Portfolio Revision – The Formula Plans Rupee cost average – Constant Rupee value – Constant ratio and variable ratio plans.	18	Lecture, PPT
V	**DERIVATIVES MARKET** Meaning – Forward Contract – Futures Contract – Options Contract.	18	Lecture, PPT

Course designated by: **Dr. K. Bala Sathya**, Assistant Professor.

&

Dr. S. Venkateswaran, Head & Associate Professor.

earning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K3&K3)	1(K2)
	CO2	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	1(K3)
CI AII	**CO3**	**Up To K4**	2	K1,K2	1	K2	2(K3&K3)	1(K4)
	CO4	**Up To K5**	2	K1,K2	2	K2	2(K4&K4)	1(K5)
Question Pattern CIA I CIA II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	40
	K2	2	4	-	10	16	32	
	K3	-	-	20	10	30	60	60
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K3&K3)	1(K2)
2	**CO2**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	**Up To K4**	2	K1,K2	1	K2	2(K3&K3)	1 (K4)
4	**CO4**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1(K5)
5	**CO5**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1(K4)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	26
K2	5	4	-	1	23	19.56	
K3	-	-	6	1	40	33.33	33
K4	-	-	4	2	40	33.33	33
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K3	
18) b	CO3	K3	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K4	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K4	
24	CO4	K5	
25	CO5	K4	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**INSURANCE AND RISK MANAGEMENT**				
Course Code	**21PCCC15**		**L**	**P**	**C**
Category	**Core**		**6**	**-**	**4**
Nature of course:	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENEURSHIP		

Course Objectives:

1. To familiarize the student's competence in Insurance at an advanced level
2. To focus on increasing proficiency in the basic Insurance, rules, policy, Risk in the workplace, etc.
3. To impart knowledge on the principles of life insurance and types of policies
4. To teach students on the nature and types of non-life insurance policies
5. To make the students understand on the various aspects of risk management

Unit: I	**Introduction to Insurance and Risk**	**18**

History of Insurance in world and India- Need for Insurance – Nature and Working of Insurance– Major Types of Insurance and their Features – Importance of Insurance Industry - Role of Insurance in Economic Development – Insurance and Social Security – Reforms in the Insurance Sector- Privatization and Liberalization in India- Indian Insurance Market- New Entrants to the Indian Insurance Market. – Risk- Meaning – advantage.

Unit: II	**Life Insurance Nature and Policy types**	**18**

Nature of Life Insurance-Principles of Insurance-Terms used in Insurance- Life Insurance Product – Various Schemes – Characteristics of an Insurable risk – Role of Insurance-Factors influencing Demand for Insurance - First Premium – Renewal – Mode of Premium Payment – Limited Period Payment and Single Premium – Lapse & Revival – Paid Up Policy – Deferment Period – Nomination & Assignment of Policy – Bonus – Surrender Value.

Unit: III	**Non-Life Insurance and Policy types**	**20**

Introduction of General Insurance- Concept and Need- Essential Features and Requirements of Fire Policy, Loss of Profits Policy, Marine Cargo Policy, Marine Hull Policy and Motor Insurance Policy including Vehicle and Third Party Insurance- Miscellaneous Policies like Personal Accident, Fidelity Guarantee, Health & Medi-claim, Burglary and Loss of Baggage- Co-insurance, Double Insurance and Reinsurance- General Insurance Cover Notes – Certificates of Insurance – Open Policy – Floater – Excess – Franchise – Claims – Salvage – Coinsurance – Loss: Total Loss, Actual or Constructive Loss- Valued Policy – Agreed Value – Full Value – First Loss – Increased Value – Insurance Time or Institute Cargo Clauses – Solarium.

Unit: IV	**Life and Non-Life Insurers Firms in India**	**16**

Public Sector Pioneers in Life and General Insurance Activities — Role of Insurance Agents and Brokers – Surveyors – Medical Examiners – Third Party Administrators – Regulators: Insurance Regulatory and Development Authority (IRDA) of India- Insurance Councils – Ombudsmen – Educational Institutes – Councils – Tariff Advisory Committee - Insurance Pricing : Factors and Determinants.

Unit: V	**Insurance Customers and Risk Management**	**18**

Individual and Corporate Insurance Customers – Nature of Insurance Customers: Mind Set as to Insurance- Investment or Risk Management – Compulsion Vs Voluntarism- Ethical Behavior – Risk

Management Attitude Control of Risk- Avoidance, Prevention, Reduction, Retention or Transfer- Factors Influencing Policyholder Satisfaction- Retention of Customers by Insurers.	
	Total Hours **90**

Book for Study

1. Alka Mittal and Gupta S L , *Principles of Insurance and Risk Management*, Sultan Chand & Sons, New Delhi., 2013

Books for Reference

1. Periasamy P, *Principles and Practice of Insurance*, Himalaya Publishing House.2011
2. Mishra M N & Mishra S B, *Insurance-Principles and Practice*, S. Chand & Company, New Delhi.2010.

Web Resources:

1. **http://ndl.iitkgp.ac.in/document/aUUzSzg0NXozaDZheVpnMEtnb3lZbW5oVXhRaDVXMXR2ZGE4NTY0RzlaVT0** (Source: National Digital Library of India)
2. **http://ndl.iitkgp.ac.in/document/aUUzSzg0NXozaDZheVpnMEtnb3lZa0J6RElUOHgyaGc3QnVuc2UzUjU1MD0** (Source: National Digital Library of India)
3. **https://youtu.be/IPlC7M4_K00** (Source: CEC EduSat)
4. **https://youtu.be/xfquWRVQQfQ** (Source: Inflibnet-e-PG Pathshala)
5. **https://youtu.be/6FLA8WpqJDc** (Source: NPTEL)

COURSE OUTCOME		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand the basics of insurance and risk	**Up to K2**
CO2	Interpret the types of Life Insurance Policies and various schemes	**Up to K5**
CO3	Describe concept of non life insurance policies (Fire and Marine) and indicate various policy conditions	**Up to K4**
CO4	Understand the Life and Non-Life Insurers Firms in India and the operation of IRDA	**Up to K3**
CO5	Recognize the various aspects of risk management	**Up to K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	3	2	2	2	3
CO 2	3	3	3	3	3	3
CO 3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3
CO 5	3	3	2	3	3	3

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	INSURANCE AND RISK MANAGEMENT	Hrs	Mode
I	**Introduction to Insurance** History of Insurance in world and India- Need for Insurance –Types & Features – Importance - Role Reforms in the Insurance Sector- Privatization and Liberalization - Indian Insurance Market- Risk.	18	Lecture / (PPT)
II	**Life Insurance Nature and Policy types** Life Insurance Product–Schemes– Characteristics-Risk–Role -Factors influencing Demand-First Premium–Renewal–Lapse & Revival – Paid Up Policy–Deferment Period–Nomination & Assignment of Policy–Bonus–Surrender Value.	18	Lecture (PPT)
III	**Non-Life Insurance and Policy types** General Insurance- Fire Policy, Marine Cargo Policy, Marine Hull Policy and Motor Insurance, Third Party Insurance- General Insurance Cover Notes – Certificates of Insurance –Loss- Valued Policy – Agreed Value – Full Value – First Loss – Increased Value – Insurance Time or Institute Cargo Clauses – Solarium.	20	Lecture (PPT)
IV	**Life and Non-Life Insurers Firms in India** Public Sector Pioneers in Life and General Insurance Activities — Role of Insurance Agents and Brokers – Surveyors – Medical Examiners – Third Party Administrators – Regulators - Insurance Pricing : Factors and Determinants.	16	Lecture (PPT)
V	**Insurance Customers and Risk Management** Individual and Corporate Insurance Customers –Investment or Risk Management – Compulsion Vs Voluntarism- Ethical Behavior – Risk Management Attitude Control of Risk- Factors Influencing Policyholder.	18	Lecture (PPT)

Course designated by:

Dr. R. Kajapriya, Assistant Professor.

&

Dr. B. Kothai Nachiar, Assistant Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1(K2)
	CO2	**Up To K5**	2	K1,K2	2	K2	2(K4&K4)	1(K5)
CI AII	**CO3**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1(K4)
	CO4	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	1(K2)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Dist ibution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	-	-	-	-	-
	K4	-	-	10	-	10	20	20
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	40
	K2	2	6	-	10	18	36	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1(K2)
2	**CO2**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
3	**CO3**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
4	**CO4**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
5	**CO5**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	34
K2	5	4	2	1	33	27.5	
K3	-	-	4	2	40	33.33	33
K4	-	-	4	1	30	25	25
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K3	
20) b	CO5	K3	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K5	
23	CO3	K4	
24	CO4	K3	
25	CO5	K3	


SECOND SEMESTER

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**APPLIED COSTING**			
Course Code	**21PCC21**	**L**	**P**	**C**
Category	**Core**	6	-	4

Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENEURSHIP

Course Objectives:

1. To familiarize the students with the various cost concepts, and elements of cost.
2. To enable the students to prepare cost sheets.
3. To apply different methods and techniques of cost control.
4. To acquaint the application of costing methods.
5. To apply the appropriate tools to take decisions.

Unit: I	**COST ACCOUNTING AND COST CONCEPT (CAS-6)**	18

Cost Accounting – Meaning – Objectives And Importance – Installation Of Cost Accounting – Status And Functions Of Cost Accountant - Cost Concepts: Elements Of Cost –Consumption Of Total Cost –Classification Of Cost – Cost Sheet – Material Cost And Control –Objectives Of Material Control – Material Control Material Control Techniques – EOQ – Material Level Setting - Activity Based Costing.

Unit: II	**EMPLOYEE COST (CAS - 7)AND OVERHEADS(CAS - 3)**	18

Employee (Labour) cost – Cost Control – Attendance & Payroll Procedures – IdleTime – Overtime – Labour Utilization – Systems of Wage Payment and Incentives – Absorption of Wages – Efficiency Rating Procedures – Employee (Labour) Turnover - Overheads Costing -Introduction – Classification of Overheads – Accounting and Control of Manufacturing Overheads – Steps for the Distribution of Overheads – Methods of Absorbing Overheads – Types of Overhead rates – Treatment of Under-Absorbed and Over-Absorbed Overheads – Accounting and control of Administrative, Selling and Distribution Overheads – Concept related to capacity – Treatment of Certain Items in Costing.

Unit: III	**OPERATING COSTING**	18

Operating Costing-Services Costing-Transport - Electricity Generation- Single unit or Output Costing – Job and Batch Costing.

Unit: IV	**PROCESS COSTING**	18

Features of Process Costing-Distinction between Process And Job Costing-Costing Procedure - Normal And Abnormal Process Losses & Gains-Inter Process Profits-Equivalent Production - methods of computing equivalent units - Joint And By Products costing – accounting for joint products & by-products.

Unit: V	**INTEGRATED & NON - INTEGRATED ACCOUNTING SYSTEM**	18

Introduction –Non- Integrated Accounting System - Integrated /Integral Accounting System – Reconciliation of Cost and Financial Accounts – Accounting and Management Information and cost control -Cost management – Cost Reduction – Target Costing –Life Cycle.

(20% Theory and 80% Problems)

	Total Hours	90

Book for study

1. Jain S.P & Narang K.L, Cost Accounting, Kalyani Publishers, 2015.
2. Reddy T S and Hari Prasad Reddy, Cost and Management Accounting, Margham Publications,

2018
Books for Reference 1. Arora M N, Cost and Management Accounting, Himalaya Publishing House, 2017. 2. Murthy A and Gurusamy S, Cost Accounting, Vijay Nicole Imprints Pvt. Ltd, 2018.
Web Resources
1. https://play.google.com/store/apps/details?hl=en&id=com.mhrd.ndl

COURSE OUTCOMES		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand the basic concepts of costing and its profitability techniques in business	**Up To K2**
CO2	Gain knowledge of different methods of payment of wages and incentives & assess the allocation and apportionment of overhead among production and service department	**Up To K4**
CO3	Identify the operating costing methods practiced by different sectors	**Up To K5**
CO4	Examine the methods of process costing to avoid losses	**Up To K3**
CO5	Get acquaintance with the application of Integrated Accounting system	**Up To K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**2**	**2**	**2**	**3**	**2**	**3**
CO 2	**3**	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**
CO 4	**3**	**3**	**3**	**3**	**2**	**3**
CO5	**2**	**3**	**3**	**2**	**2**	**2**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	SUBJECT NAME	Hrs	Mode
I	**COST ACCOUNTING AND COST CONCEPT (CAS-6)** Cost Accounting — Status And Functions Of Cost Accountant - Cost Concepts - Cost Sheet – Material Cost And Control — EOQ – Material Level Setting - Activity Based Costing.	18	**Lecture-Chalk & Talk**
II	**EMPLOYEE COST (CAS - 7)AND OVERHEADS(CAS - 3):** Employee cost – Cost Control – Attendance & Payroll Procedures – Idle Time – Overtime – Labour Utilization – Systems of Wage Payment and Incentives – Overheads –Concept related to capacity – Treatment of Certain Items in Costing.	**18**	**Lecture-Chalk & Talk**
III	**OPERATING COSTING** Operating and Operation Costing-Services Costing-Transport, Electricity Generation, Single unit or Output Costing – Job and Batch Costing.	18	**Lecture-Chalk & Talk**
IV	**PROCESS COSTING** Distinction between Process And Job Costing-Costing Procedure - Normal And Abnormal Process Losses & Gains-Inter Process Profits-Equivalent Production - accounting for joint products & by-products.	**18**	**Lecture-Chalk & Talk**
V	**INTEGRATED & NON - INTEGRATED ACCOUNTING SYSTEM:** Introduction –Reconciliation of Cost and Financial Accounts – Accounting and Management Information and cost control -Cost management – Cost Reduction – Target Costing –Life Cycle.	18	**Lecture-Chalk & Talk**

Course Designed by,

Dr. K. Bala Sathya, Assistant Professor.

&

Dr. S. Ganesan, Associate Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1(K2)
	CO2	**Up To K4**	2	K1,K2	2	K2	2(K4&K4)	1(K3)
CI AII	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	2(K2)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	-	10	10	20	20
	K4	-	-	10	-	10	20	20
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	40
	K2	2	6	-	10	18	36	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1(K2)
2	**CO2**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
3	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
5	**CO5**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	34
K2	5	4	2	1	33	27.5	
K3	-	-	4	2	40	33.33	33
K4	-	-	4	1	30	25	25
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K3	
20) b	CO5	K3	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K4	
23	CO3	K5	
24	CO4	K3	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**BUSINESS RESEARCH METHODS**			
Course Code	**21PCCC22**	**L**	**P**	**C**
Category	**CORE**	6	-	4

Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	**ENTREPRENEURSHIP** ✓

Course Objectives:

1. Provide basic knowledge about the concept, tools and techniques of business research.
2. Identify various sources of information for literature review and data collection.
3. Teach the preparation of questionnaire and Interview Schedule and formulate &Test the Hypothesis.
4. Help the students to adopt appropriate statistical tools for drawing inference.
5. Write a research report and thesis.

Unit: I	**Introduction To Research**	18

Meaning and Definition of Social Research – Objectives of Research –Types of Research - Research process – Criteria of Good Research –Maintaining Objectivity in Research – Problems Encountered by Researchers.

Unit: II	**Problem Formulation**	18

Identifying Research Problem – Sources of Research Problem – Techniques Involved in Defining a Research Problem – Research Design: Meaning and Importance; Types of Research Designs – Exploratory – Descriptive – Case Study Design.

Unit: III	**Data Collection**	18

Methods of Data Collection –Observation – Questionnaire &Interviewing – Guidelines for Constructing Questionnaire and Interview Schedule – Sample Design: Defining Universe and Sampling Unit – Determining Sampling Frame – Probability and Non-Probability Sampling Methods – Sample Size Determination – Sampling and Non sampling Errors – Scaling Methods – Hypothesis; Hypothesis Formulation and Hypothesis Testing.

Unit: IV	**Data analysis and Interpretation using SPSS**	18

Descriptive statistics – Factor Analysis – Reliability test – Parametric Analysis – T-test – ANOVA – Correlation –Regression – Non-Parametric Analysis – Chi-square – Sign Test – Wilcoxon – Mc-Nemar –Kolmogorou Smirnov test – Mann-Whitney U test – Kruskal Wallis H test.

Unit: V	**Report Writing**	18

Report Writing – Kinds of Research Reports – Steps in Report Writing – Layout of Research Report – Mechanics in Writing a Research Report –Precautions in Writing a Research Report.

	Total Hours	**90**

Book for study:

1. Donald R cooper, Pamela S Schindler, J K Sharma (2012), Business Research, Methods, McGraw Hill Education (India) New Delhi.
2. Kothari C R, Gaurav Garg, (2015), Research Methodology New Age International (P) Limited Publishers.

Book for Reference:

1. Gupta S P (2009), Statistical Methods, S.Chand& Sons Publisher, New Delhi.
2. MartynDenscombe, (2003), The Good Research Guide for Small Scale ResearchProjects, Viva Books Pvt. Ltd.

3. PankajMadan, VageeshPaliwal, RajulBhardwaj, (2010), Research Methodology,Global Vision Publishing House New Delhi.
4. Pillai R S N, and Bagavathi V (2010), Statistics, S.Chand& Sons Publisher, NewDelhi.
5. Suchdeva, (2010), "Business Research Methodology", Himalaya Publishing House,Mumbai.

Web Resources:
1.National Digital Library

COURSE OUTCOME		**K Level**
After completion of the course the student will be able to,		
CO1	Understand the Concepts Relating to Business Research, Types and Process.	**K3**
CO2	Identify the Research Problem and Draw the Design.	**K4**
CO3	Prepare Questionnaire and Interview Schedule and Formulate & Test the Hypothesis.	**K5**
CO4	Adopt Appropriate Statistical Tools for the Inferences.	**K4**
CO5	Write a Research Report.	**K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**3**	**3**	**3**	**3**	**3**
CO 2	**3**	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**2**	**2**	**3**	**3**
CO 4	**3**	**3**	**2**	**3**	**2**	**3**
CO5	**3**	**3**	**3**	**3**	**3**	**3**

***3** –Advanced Application; **2 –** Intermediate Development; **1 –** Introductory Level

LESSON PLAN

UNIT	SUBJECT NAME	Hrs	Mode
I	**Introduction to Research** Meaning and Definition of Social Research – Objectives of Research – Types of Research - Research process – Criteria of Good Research – Maintaining Objectivity in Research – Problems Encountered by Researchers.	18	PPT & Lecture
II	**Problem Formulation** Identifying Research Problem – Sources of Research Problem – Techniques Involved in Defining a Research Problem – Research Design: Meaning and Importance; Types of Research Designs – Exploratory – Descriptive – Case Study Design.	18	PPT & Lecture
III	**Data Collection** Methods of Data Collection–Questionnaire &Interviewing –Sample Design - Sampling Frame – Probability and Non-Probability Sampling Methods–Sample Size Determination–Errors–Scaling Methods–Hypothesis.	18	PPT & Lecture
IV	**Data analysis and Interpretation using SPSS** Descriptive statistics – Factor Analysis –Parametric Analysis – T-test – ANOVA – Correlation –Regression – Non-Parametric Analysis – Chi-square – Sign Test – Wilcoxon – Mc-Nemar –Kolmogorou Smirnov test – Mann-Whitney U test – Kruskal Wallis H test.	18	PPT & Lecture
V	**Report Writing** Report Writing – Kinds of Research Reports – Steps in Report Writing – Layout of Research Report – Mechanics in Writing a Research Report – Precautions in Writing a Research Report.	18	PPT & Lecture

Course Designed by:

Dr. V. Geetha, Assistant Professor. & **Dr. V. Devika**, Assistant Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K - Level**	**No. of. Questions**	**K - Level**		
CI AI	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K3&K3)	1(K2)
	CO2	**Up To K4**	2	K1,K2	2	K2	2(K4&K4)	1 (K4)
CI AII	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	**Up To K4**	2	K1,K2	2	K2	2(K3&K3)	1 (K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marks for each section	**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2	2	-	-	4	8	**40**
	K2	2	4	-	10	16	32	
	K3	-	-	10	-	10	20	**20**
	K4	-	-	10	10	20	40	**40**
	K5	-	-	-	-	-	-	**-**
	Marks	**4**	**6**	**20**	**30**	**60**	**100**	**100**
CIA II	**K1**	2	-	-	-	2	4	**20**
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	**20**
	K4	-	-	10	10	20	40	**40**
	K5	-	-	-	10	10	20	**20**
	Marks	**4**	**6**	**20**	**30**	**60**	**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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K3&K3)	1(K2)
2	**CO2**	**Up To K4**	2	K1,K2	1	K2	2(K3&K3)	1 (K4)
3	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1(K4)
5	**CO5**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	1	-	-	7	5.83	26
K2	5	4	-	1	23	19.67	
K3	-	-	6	1	40	33.33	33
K4	-	-	4	2	40	33.33	33
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K3	
20) b	CO5	K3	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K4	
23	CO3	K5	
24	CO4	K4	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**APPLIED OPERATIONS RESEARCH**				
Course Code	**21PCCC23**		**L**	**P**	**C**
Category	**CORE**		**6**	**-**	**4**
Nature of Course	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENEURSHIP		

Course Objectives:

1. To find the most economical solution to a managerial problem within all of its limitations and constrains.
2. To calculate the minimum cost of product distribution from a number of sources to number of destinations.
3. To solve the problems involve queries (waiting line) and to construct cost effective work flow systems.
4. To gain knowledge on the operations of a real-world process or system through simulation.
5. To develop project's procedures of initiation, planning, execution and closure within the set of scope, time, quality and budget standards.

Unit: I	**Operation Research and Linear Programming**	**18**

Quantitative Approach to Decision Making - Nature and Significance of OR in Decision Making- Models in Operations Research- Application Areas of Operation Research- Linear Programming- General Concepts -Definitions - Assumptions in Linear Programming - Limitations in Linear Programming - Applications of Linear Programming - Formulation of LP Problems – Solution Methods - Graphical method - maximization and minimization- Simplex method -maximization and minimization-Big M Method.

Unit: II	**Transportation and Assignment Problems**	**18**

Transportation problems (Initial Basic Feasible Solution) – assumptions – degenerate solution – North-west corner method – least cost method – Vogel's approximation method – Assignment problems – Features – Transportation problem Vs Assignment problem – Hungarian Method.

Unit: III	**Game and Queuing Theory**	**18**

Game theory – meaning – types of games – basic assumptions – finding value of game for pure strategy – mixed strategy – Indeterminate matrix and average method – graphical method – pure strategy – saddle point – pay-off matrix – value of game .

Queuing theory – need – objective – application – characteristics – limitations – queuing models (single channel)

Unit: IV	**Simulation and Replacement models**	**18**

Simulation – meaning – advantages – limitations – Monte Carlo simulation – finding randomized result – simulation problems - Replacement models - factors for replacement – replacement model – application – determining optimum replacement age (ORA).

Unit: V	**Project Management**	**18**

Project Management -Introduction- Types of Networks - CPM : Critical Path Method and PERT: Programme Evaluation Review Technique – Basic differences between CPM and PERT - Drawing a network - Obtaining of Critical Path- Time estimates for activities-Probability of completion of project- Determination of floats-(total- free-independent .

	Total Hours	**90**

Book for study:
A. M. Natarajan, P. Balasubramanie & A. Tamilarasi (2014), *Operations Research*, Pearson India

Books for Reference:
1. Dr. P. R. Vittal (2003), *Introduction to Operations Research*, Margham Publications, Chennai
2. Kanti Swarup, P. K. Gupta & Man Mohan, (2010), '*Operations Research'*, Jain Book Agency, New Delhi
3. Kapoor V K, (2016), '*Operations Research Techniques for Management'*, Sultan Chand and Sons, New Delhi

Web Resources:

http://ndl.iitkgp.ac.in/document/Z2RWUHoyS0JXTUdZczNJeE9zVU9OOFlBYkplNWN1Q0pCdEVQSFo5RHNGTT0
http://ndl.iitkgp.ac.in/document/OEYweXpIRmlkYURkM3JkbUdtKy9UZjBqcW9qYU04Y09rTXpzSVR3QWRrTGUzd1NEUXlQWndubWJuNzE4WXluUXozanJOc1UxOTBXMHA5YW5sRjJESXc9PQ
http://ndl.iitkgp.ac.in/document/OEYweXpIRmlkYURkM3JkbUdtKy9UVVp4TWJ4RDBMUnMyazB2b09tOHJoMkJIU0NYTEVyVGZYcGprbzJrMWM3bnZnQ1V2QmRyK2hPRWdtOC9PMCtiV2c9PQ
https://nptel.ac.in/courses/111/107/111107128/

Course Outcomes:		K Level
After the completion of the course the student will be able to,		
CO1	Understand the conceptual aspects of operations research and knowledge on linear programming problem	**Up to K2**
CO2	Apply Assignment and Transportation methods for effective operation of business	**Up to K4**
CO3	Solve the problems related to Game theory	**Up to K5**
CO4	Perform Queuing models	**Up to K3**
CO5	Know the techniques of project management which is used to manage certain and uncertain activities of any project.	**Up to K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	2	2	3	2	2
CO 2	3	3	3	3	3	3
CO 3	3	3	2	3	3	3
CO 4	3	3	3	2	3	3
CO 5	3	3	3	3	3	3

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	APPLIED OPERATIONS RESEARCH	Hrs	Mode
I	**Operation Research & Linear Programming** Operations Research- Application - Linear Programming– Solution Methods - Graphical method - Simplex method	18	Chalk & Talk
II	**Transportation and Assignment Problems** Transportation problems (Initial Basic Feasible Solution) – assumptions – degenerate solution – North-west corner method – least cost method – Vogel's approximation method – Assignment problems – Features – Transportation problem Vs Assignment problem – Hungarian Method	18	Chalk & Talk
III	**Game and Queuing Theory** Game theory– basic assumptions – finding value of game for pure strategy – mixed strategy – Indeterminate matrix and average method .	18	Chalk & Talk
IV	**Simulation and Replacement models** Simulation –Replacement models - factors – application – determining optimum replacement age .	18	Chalk & Talk
V	**Project Management** Introduction- Types of Networks – CPM – PERT - Drawing a network - Time estimates for activities-Probability of completion of project-Determination of floats (total, free, independent)	18	Chalk & Talk

Course designed by:

Dr. R. Kajapriya, Assistant Professor.

&

Dr. S. Venkateswaran, Head & Associate Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1(K2)
	CO2	**Up To K4**	2	K1,K2	2	K2	2(K4&K4)	1 (K3)
CI AII	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1(K5)
	CO4	**Up To K3**	2	K1,K2	2	K2	2(K3&K3)	1(K3)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	
	K2	2	4	10	10	26	52	
	K3	-	-	-	10	10	20	
	K4	-	-	10	-	10	20	
	K5	-	-	-	-	-	-	
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	-	10	20	20
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K2**	2	K1,K2	1	K1	2(K2&K2)	1 (K2)
2	**CO2**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
3	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
5	**CO5**	**Up To K3**	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	34
K2	5	4	2	1	33	27.5	
K3	-	-	4	2	40	33.33	33
K4	-	-	4	1	30	25	25
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions)
Answer All Questions **(10x1=10 marks)**

Q. No	CO	K Level	Questions
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	

Section B (Short Answers)
Answer All Questions **(5x2=10 marks)**

Q. No	CO	K Level	Questions
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	

Section C (Either/Or Type)
Answer All Questions **(5 x 5 = 25 marks)**

Q. No	CO	K Level	Questions
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K3	
20) b	CO5	K3	

NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels

Section D (Open Choice)
Answer Any Three questions **(3x10=30 marks)**

Q.No	CO	K Level	Questions
21	CO1	K2	
22	CO2	K4	
23	CO3	K5	
24	CO4	K3	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**APPLIED E-COMMERCE**					
Course Code	**21PCCC24**			**L**	**P**	**C**
Category	**CORE**			6	-	4
Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	**ENTREPRENEURSHIP**		✓

Course Objectives:

1. To learn the basics of Electronic Commerce.
2. To impart essential knowledge on models of E-Commerce.
3. To know E-Commerce & E-enterprise Applications.
4. To understand more about security framework.
5. To enable the students to learn Cyber laws.

Unit: I	**E-COMMERCE –AN OVERVIEW**	18

Introduction,- Evolution of Electronic Commerce- Roadmap of E-Commerce in India- Main activitiesFunctions and Scope of E-Commerce. - Benefits and Challenges of E-Commerce.

Unit: II	**BUSINESS MODELS OF E-COMMERCE**	18

Characteristics of Business to Business(B2B) - Business to Consumers (B2C) - Business to Government (B2G) - Concepts of other models of E-commerce - Business to Consumer E-Commerce process - Business to Business E- Commerce - Need and Importance, alternative models of B2B E – Commerce - E-Commerce Sales Product Life Cycle (ESLC) Model.

Unit: III	**E-COMMERCE APPLICATIONS**	18

Applications of E-commerce and E-enterprise - Applications to Customer Relationship Management- Types of E-CRM, Functional Components of E-CRM - Managing the E-enterprise – Introduction - Managing the - E-enterprise, Comparison between Conventional and E-Organisation - Organisation of Business in an E-enterprise - Benefits and Limitations of E- enterprise.

Unit: IV	**Electronic Payment**	18

Benefits of Electronic Payment- Components of Electronic System-Electronic fund Transfer – Financial EDI-Credit Card System on the Internet – Components of Online Credit Processing – Players in the credit card system – Popular Electronic Payment Methods – Security Requirements in E-Payment Systems – Key Security Schemes – Secret key cryptography – Online Transactions Protocols.

Unit: V	**CYBER LAW**	18

Introduction to Cyber Laws-World Scenario - Cyber-crime& Laws in India and their limitations, Hacking, Web Vandals, E-mail Abuse, Software Piracy and Patents - Security Issues in E-Commerce-Risk management approach to Ecommerce Security - Types and sources of threats, Protecting electronic commerce assets and intellectual property.

	Total Lecture Hours	90

Books for study:

1. Bhasker, B. ,Electronic Commerce Framework, Technologies and Applications. New Delhi: McGraw Hill Educations, 2017.

Books for Reference:

1. Jaiswal.S. E-Commerce IElectronic Communication for Business). New Delhi: Galgotia Publications Pvt. Ltd, 2000.
2. Kalakota, R., & Whinston, A. B. Frontiers of Electronic Commerce. New Delhi: Pearson Education

India, 2002.
3. Rayudu, C. E-Commerce and E-Business. Mumbai: Himalaya Publishing House , 2010.
4. Rayport, & Jaworeski, B. J. Introduction to E-Commerce. Noida , UP: McGraw Hill Publishing Company Limited, 2009.
5. Tomasi, W. ,Electronic Communication Systems Fundamentals Through Advanced. New Delhi: Pearson Education, 2008.

Web Resources:

1. https://play.google.com/store/apps/details?hl=en&id=com.mhrd.ndl

COURSE OUTCOME		**K Level**
After the completion of the course the student will be able to,		
CO1:	Gain basic knowledge on electronic commerce concepts	Up to K3
CO2:	Develop the knowledge on Network Infrastructure	Up to K4
CO3:	Use electronic commerce	Up to K5
CO4:	Understand security framework	Up to K4
CO5:	Gain essential knowledge on directory services and Cyber laws	Up to K4

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	2	2	2	2	2	2
CO 2	3	3	2	3	3	3
CO 3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3
CO 5	3	2	2	2	3	3

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	SUBJECT NAME	Hrs	Mode
I	**E-COMMERCE –AN OVERVIEW-** Introduction, History/Evolution of Electronic Commerce, Roadmap of E-Commerce in India, Main activities, Functions and Scope of E-Commerce. - Benefits and Challenges of E-Commerce.	18	Lecture-Chalk & Talk,PPT
II	**BUSINESS MODELS OF E-COMMERCE-** Characteristics of Business to Business- Business to Consumers - Business to Government - Business to Consumer E-Commerce process - Business to Business - E-Commerce Sales Product Life Cycle .	18	Lecture-Chalk & Talk,PPT
III	**E-COMMERCE APPLICATIONS-**Applications of E-commerce - Applications to Customer Relationship Management–E-enterprise, Comparison between Conventional and E-organisation - Organisation of Business in an E-enterprise .	18	Lecture-Chalk & Talk,PPT
IV	**Electronic Payment -** Benefits of Electronic Payment- Components of Electronic System-Electronic fund Transfer – Financial EDI-Credit Card System on the Internet – Components of Online Credit Processing – Players in the credit card system – Popular Electronic Payment Methods – Security Requirements in E-Payment Systems – Key Security schemes – Secret key cryptography – Online Transactions Protocols.	18	Lecture-Chalk & Talk,PPT
V	**CYBER LAW -** Introduction - Hacking, Web Vandals, E-mail Abuse, Software Piracy and Patents - Security Issues in E-Commerce- Risk management approach to Ecommerce Security intellectual property.	18	Lecture-Chalk & Talk, PPT

Course Designed by:

1. **Dr. R. Arputharaj**, Assistant Professor.
2. **Dr. V. Devika**, Assistant Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K3&K3)	1(K2)
	CO2	**Up To K4**	2	K1,K2	2	K2	2(K4&K4)	1 (K3)
CI AII	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	**Up To K4**	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	40
	K2	2	4	-	10	16	32	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	-	10	20	20
	K5	-	-	-	-	-	-	
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	**Up To K3**	2	K1,K2	1	K1	2(K2&K2)	1(K3)
2	**CO2**	**Up To K4**	2	K1,K2	1	K2	2(K3&K3)	1 (K4)
3	**CO3**	**Up To K5**	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	**Up To K4**	2	K1,K2	1	K2	2(K4&K4)	1(K4)
5	**CO5**	**Up To K4**	2	K1,K2	1	K2	2(K3&K3)	1(K4)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.85	25
K2	5	4	2	-	23	19.17	
K3	-	-	4	1	30	25	25
K4	-	-	4	3	50	41.66	42
K5	-	-	-	1	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K3	
20) b	CO5	K3	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K3	
22	CO2	K4	
23	CO3	K5	
24	CO4	K4	
25	CO5	K4	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**Advanced Excel - Lab**			
Course Code	**21PCCNP1**	**L**	**P**	**C**
Category	**Non Major Elective**	**-**	**6**	**6**

Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENEURSHIP

Course Objectives:

1. To understand, summarize and present numerical data using the digital tool Microsoft program Excel.
2. To plot numerical data as a graph and determine an equation of a line. In addition, understand the Regression analysis ,correlation analysis.
3. To set up the chart function of Excel to represent numeric data in multiple formats.
4. To build formulas, including the use of built-in functions, and relative and absolute references.
5. To observe the value of using Excel to make decisions.

List of Programs:

1. Create a table to perform statistical and mathematical functions.
2. Create a spreadsheet to sort data and print portions of a worksheet.
3. Create worksheet with following fields Empno, Ename, Basic Pay(BP), Travelling Allowance(TA), Dearness Allowance(DA), House Rent Allowance(HRA), Income Tax(IT), Provident Fund(PF), Net Pay(NP)
   Given: DA= 30% of BP, HRA=20% of BP, TA=17.5% of BP, IT=15% of BP, PF=12.5% of BP
4. Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar chart?
5. Diagrammatic presentation of data in **Graphing and Charting** using MS Excel (line chart, pie chart, Pivot charts) **75**
6. Import and Export the data (.txt or .csv) files.
7. Create a spreadsheet to use IF, nested IF, VLOOKUP and the HLOOKUP functions of Excel.
8. Demonstrate any FIVE Statistical functions using MS-Excel.(MEAN,MEDIAN,MODE,Standard Deviation, Quartiles Functions,etc.,)
9. Draw a Histogram Diagram in MS-Excel using student data set
10. Use the data below to create a histogram for annual returns on stocks, bills, and bonds. Which investment has the highest average return?

Year	Stocks	T. Bills	T. Bonds
1928	43.81%	3.08%	0.84%
1929	-8.30%	3.16%	4.20%
1930	-25.12%	4.55%	4.54%
1931	-43.84%	2.31%	-2.56%
1932	-8.64%	1.07%	8.79%
1933	49.98%	0.96%	1.86%
1934	-1.19%	0.30%	7.96%
1997	31.86%	4.91%	9.94%
1998	28.34%	5.16%	14.92%
1999	20.89%	4.39%	-8.25%
2000	-9.03%	5.37%	16.66%
2001	-11.85%	5.73%	5.57%

11. Calculate correlation coefficient in Excel AND plot a correlation graph in Excel
12. Perform Regression analysis with given dataset.
13. Perform correlation analysis with given data.
14. Create pivot table and carry out the analysis with charts.
15. From the following data obtain the Pearson's coefficient of correlation

X	10	15	12	17	13	16	24	14
Y	30	42	45	46	33	34	40	35

Total Hours 75

COURSE OUTCOMES		**K Level**
CO1:	Understand and apply basic principles of laying out Excel models for decision making.	**Up To K3**
CO2:	Apply advanced formulas to lay data in readiness for analysis.	**Up To K3**
CO3:	Identify the different advanced techniques for report visualizations	**Up To K3**
CO4:	Incorporate the formatting of charts in Excel.	**Up To K4**
CO5:	Assess the practice of referencing across sheets.	**Up To K4**

CO & PO Mappings:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**3**	**2**	**2**	**3**	**3**
CO 2	**3**	**2**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**2**	**2**	**2**	**3**
CO 4	**2**	**3**	**3**	**2**	**3**	**3**
CO 5	**3**	**2**	**1**	**3**	**3**	**3**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	HOURS	PEDAGOGY
UNIT - I	Create a table to perform statistical and mathematical functions.	5	LAB-PRACTICAL
	Create a spreadsheet to sort data and print portions of a worksheet.	5	
	Create worksheet with following fields Empno, Ename, Basic Pay(BP), Travelling Allowance(TA), Dearness Allowance(DA), House Rent Allowance(HRA), Income Tax(IT), Provident Fund(PF), Net Pay(NP)	5	
UNIT - II	Create an Excel Worksheet for the monthly sales of a product and also represent the data by using bar chart?	5	
	Diagrammatic presentation of data in **Graphing and Charting** using MS Excel (line chart, pie chart, Pivot charts)	5	
	Import and Export the data (.txt or .csv) files	5	
UNIT - III	Create a spreadsheet to use IF, nested IF, VLOOKUP and the HLOOKUP functions of Excel.	5	
	Demonstrate any FIVE Statistical functions using MS-Excel.(MEAN, MEDIAN, MODE, Standard Deviation, Quartiles Functions, etc.,)	5	
	Draw a Histogram Diagram in MS-Excel using student data set	5	
UNIT - IV	Use the data below to create a histogram for annual returns on stocks, bills, and bonds. Which investment has the highest average return?	5	
	Calculate correlation coefficient in Excel AND plot a correlation graph in Excel	5	
	Perform Regression analysis with given dataset.	5	
UNIT - V	Perform correlation analysis with given data.	5	
	Create pivot table and carry out the analysis with charts.	5	
	From the following data obtain the Pearson's coefficient of correlation	5	

Course designed by:

1. **Dr.B.Vijayalakshmi,** Assistant Professor.
2. **Mrs.T.Sujithra**, Assistant Professor.


THIRD SEMESTER

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**ADVANCED CORPORATE ACCOUNTING**			
Course Code	**21PCCC31**	**L**	**P**	**C**
Category	**Core**	6	-	4

Nature of course:	**EMPLOYABILITY** ✓	SKILL ORIENTED	ENTREPRENURSHIP

Course Objectives:

1. To impart knowledge on final accounts of joint stock companies
2. To enable the students to understand the procedures of accounting
3. To learn the preparation of accounts of banking companies
4. To enable them to develop skills in the preparation of accounting statements and their analysis
5. To know the procedure for preparation of Double Accounting System

Unit: I	**FINAL ACCOUNT OF JOINT STOCK COMPANY**	**18**

Financial Statements – Objectives – Preparation of Financial Statements of Joint Stock Companies - Form and Contents of Profit and Loss Account and Profit and Loss Appropriation Account – Form of Balance Sheet as per AS-3

Unit: II	**HOLDING COMPANY ACCOUNTS**	**18**

Introduction-Advantages-Disadvantages-Wholly –owned Subsidiary Companies-Partly –owned Subsidiary Companies- Presentation of Accounts-Principles of Consolidation-Elimination of Investment in Shares-Minority Interest Cost of Control-Capital and Revenue Profit-Revaluation of Assets and Liabilities Elimination of Common Transactions.

Unit: III	**ACCOUNTS OF BANKING COMPANIES**	**18**

Banking Company Accounts – Preparation of Banking Account – Rebate on Bills Discounted – Non-Performing Assets –Preparation of Profit and Loss Account and Balance Sheet-Money at Call and Short Notice –Advances.

Unit: IV	**ACCOUNTS OF INSURANCE COMPANIES**	**18**

Types of Insurance-Annual Accounts-Life Insurance-Consideration for Annuities Granted-Revenue Account – Valuation Balance Sheet-Balance Sheet – Accounts of General Insurance-Fire Insurance – Marine Insurance - Reserve for Unexpired Risk -Preparation of Final Accounts.

Unit: V	**DOUBLE ACCOUNTING SYSTEM**	**18**

Introduction-Meaning - Double Account System-Features of Double Account System-Advantages and Disadvantages- Double Entry System Vs. Double Account System - Accounts of Electricity Companies – Revenue Account – Net Revenue Account – Capital Account - General Balance Sheet - Replacement and Renewals – Disposal of Surplus.

	Total Lecture Hours	**90 Hrs**

(80% of marks must be allotted to problem solving questions. 20% of marks must be allotted to Theory questions).

Books for Study:

1.T.S. Reddy and Dr. A. Murthy, "Corporate Accounting", Margham Publications (Reprint 2021)

Books for References:

1. R.L. Gupta & M. Radhaswamy, "Corporate Accounting", 2017, Sultan Chand & Sons, New Delhi.
2. M.A. Arulanandam & K.S. Raman, "Advanced Accountancy", Vol-II, Sixth Edition,2016,

Himalaya Publishing House, Mumbai.
3. S. N. Maheshwari & Suneel. K. Maheshwari, "Corporate Accounting", Fifth Edition, 2018, Vikas Publishing House Pvt. Ltd.
4. S.P. Jain & K.L Narang, "Corporate Accounting", 2017, Kalyani Publishers, Mumbai.

Web Resources:

1. **https://ncert.nic.in/ncerts/l/leac201.pdf**
2. **https://byjus.com/commerce/final-accounts/**
3. **https://www.accountingtools.com/articles/2017/5/9/liquidation**
4. **https://www.yourarticlelibrary.com/accounting/holding-company/meaning-holding**
5. **company/holding-company-a-close-view-company-accounts/68346**
6. **https://www.accountingnotes.net/final-accounts/final-accounts-of-general-insurancecompaniesaccounting/13085**

Course Outcomes		**K Level**
CO1:	The Student gather knowledge pertinent to joint stock companies	**Up to K2**
CO2:	The student can understand and prepare the accounts of Holding Companies	**Up to K5**
CO3:	The student can able to prepare the accounts of Banking Companies	**Up to K4**
CO4:	The student could prepare the Insurance Company accounts	**Up to K4**
CO5:	The student is able to understand and prepare the Double Account System	**Up to K3**

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**2**	**2**	**3**	**3**	**3**	**3**
CO 2	**2**	**2**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**
CO 4	**3**	**3**	**3**	**3**	**3**	**3**
CO 5	**3**	**3**	**2**	**2**	**3**	**3**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

Unit	ADVANCED CORPORATE ACCCOUNTING	Hrs	Pedagogy
I	**Final Account of Joint Stock Company**	18	Chalk & Talk, Exercise, PPTs, Quiz
II	**Holding Company Accounts**	18	Chalk & Talk, Exercise, PPTs, Quiz
III	**Accounts of Banking Companies**	18	Chalk & Talk, Exercise, PPTs, Quiz
IV	**Accounts of Insurance Companies**	18	Chalk & Talk, Exercise, PPTs, Quiz
V	**Double Accounting System**	18	Chalk & Talk, Exercise, PPTs, Quiz

Course Designed by:
Dr. V. Geetha, Assistant Professor & **Dr. K. Bala Sathya,** Assistant Professor

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	Up to K2	2	K1,K2	1	K2	2(K2&K2)	1(K2)
	CO2	Up to K4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
CI AII	**CO3**	Up to K4	2	K1,K2	1	K2	2(K3&K3)	1(K4)
	CO4	Up to K4	2	K1,K2	2	K2	2(K4&K4)	1(K3)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**SectionC (Either / Or Choice)**	**SectionD (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidateof %**
CIAI	**K1**	2	-	-	-	2	4	60
	K2	2	6	10	10	28	56	
	K3	-	-	10	-	10	20	20
	K4	-	-	-	10	10	20	20
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	10	20	40	40
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	CO1	Up to K2	2	K1&K2	1	K2	2(K2&K2)	1(K2)
2	CO2	Up to K4	2	K1&K2	1	K2	2(K4&K4)	1(K5)
3	CO3	Up to K4	2	K1&K2	1	K2	2(K3&K3)	1(K4)
4	CO4	Up to K4	2	K1&K2	1	K2	2(K3&K3)	1(K4)
5	CO5	Up to K3	2	K1&K2	1	K2	2(K2&K2)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No.of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(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 (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	-	-	-	5	4.2	42
K2	5	10	20	10	45	37.5	
K3	-	-	20	10	30	25	25
K4	-	-	10	20	30	25	25
K5	-	-	-	10	10	8.33	8
Marks	**10**	**10**	**50**	**50**	**120**	**100**	**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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q.No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q.No	**CO**	**K Level**	**Questions**
11	CO1	K2	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q.No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K3	
18) b	CO3	K3	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K2	
20) b	CO5	K2	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K5	
23	CO3	K4	
24	CO4	K4	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**ADVANCED MANAGEMENT ACCOUNTING**				
Course Code	**21PCCC32**		**L**	**P**	**C**
Category	**Core**		6	-	4
Nature of course:	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENURSHIP		

COURSE OBJECTIVES:

1.	To develop and understand the conceptual framework of management Accounting.
2.	To teach the mechanics of preparation of cash flow and funds flow statement.
3.	To make the students to get practical skill in solving management problems.
4.	This course develops employability skills of the students.
5.	To acquire the students, the management accounting techniques that facilitates managerial decision making.

Unit: I	**MANAGEMENT ACCOUNTING**	**15 hours**

Meaning – Objectives And Scope – Relationship Between Management Accounting, Cost Accounting And Financial Accounting – Financial Statement Analysis – Ratio Analysis – Analysis Of Liquidity – Solvency And Profitability.

Unit: II	**FUND FLOW AND CASH FLOW ANALYSIS**	**15 hours**

Meaning – Difference Between Fund Flow Statement And Cash Flow Statement – Preparation of Fund Flow Statement And Cash Flow Statement.

Unit: III	**MARGINAL COSTING**	**18 hours**

Meaning – Features – Assumption – Break Even And CVP Analysis – Application Of Marginal Costing In Managerial Decision Making.

Unit: IV	**STANDARD COSTING**	**21 hours**

Standard costing – Setting standards – Variance analysis and reporting – Material, Labour, Overhead – Sales and profit variance – Reporting and investigation of variance.

Unit: V	**BUDGETARY CONTROL**	**21 hours**

Budget and Budgetary control forecasting Vs. Budget – Preparation of functional budget – Types of budgets – Zero base budgeting – Programme budgeting and performance budgeting.

	Total Lecture Hours	90

(80% of marks must be allotted to problem solving questions. 20% of marks must be allotted to Theory questions).

Books for Study:

1.S.N.Maheswari, Management Accounting and Financial Control, Vikas Publishers, Delhi, 2021

Books for References:

1. Shashi K.Gupta, R.K.Sharma, Management Accounting, Kalyani Publishers, Ludhiana, 2017.
2. R.Ramachandran and R.Srinivasan, Management Accounting, Sriram Publications 2020.

Web Resources:

1.https://nptel.ac.in/courses/110/101/110101003/
2.https://nptel.ac.in/courses/110/101/110101004/
3.https://nptel.ac.in/courses/110/107/110107127/

4.https://www.classcentral.com/course/swayam-management-accounting-14177		
COURSE OUTCOME		**K Level**
CO1:	Enable students to analyze financial statement , Liquidity , solvency and Profitability	**Up to K3**
CO2:	Enable students to prepare Fund flow and Cash Flow statement	**Up to K3**
CO3:	Enable students to Identify the Break Even and able to apply	**Up to K4**
CO4:	Enable students to apply Standard costing to analyze variance	**Up to K5**
CO5:	Enable students to prepare performance budgeting	**Up to K4**

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**2**	**2**	**2**	**2**	**2**
CO 2	**3**	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**
CO 4	**2**	**3**	**3**	**3**	**3**	**3**
CO 5	**2**	**2**	**2**	**3**	**2**	**3**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

Unit	ADVANCED MANAGEMENT ACCOUNTING	Hrs	Pedagogy
I	**Management Accounting**	**15**	**Chalk and Talk**
II	**Fund Flow and Cash Flow Analysis**	**15**	**Chalk and Talk**
III	**Marginal Costing**	**18**	**Chalk and Talk**
IV	**Standard Costing**	**21**	**Chalk and Talk**
V	**Budgetary Control**	**21**	**Chalk and Talk**

Course Designed by:

Dr. R.Ratheka, Assistant Professor

&

Dr.B.Kothai Nachiar, Assistant Professor

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	**Up to K3**	**2**	**K1,K2**	**1**	**K1**	2(K3&K3)	1(K2)
	CO2	**Up to K3**	**2**	**K1,K2**	**2**	**K2**	2(K3&K3)	1(K3)
CI AII	**CO3**	**Up to K4**	**2**	**K1,K2**	**1**	**K2**	2(K3&K3)	1(K4)
	CO4	**Up to K5**	**2**	**K1,K2**	**2**	**K2**	2 (K4&K4)	1(K5)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CI A I	**K1**	**2**	**2**	**-**	**-**	**4**	**8**	**40**
	K2	**2**	**4**	**-**	**10**	**16**	**32**	
	K3	**-**	**-**	**20**	**10**	**30**	**60**	**60**
	K4	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	K5	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Marks	**4**	**6**	**20**	**20**	**50**	**100**	**100**
CIA II	**K1**	**2**	**-**	**-**	**-**	**2**	**4**	**20**
	K2	**2**	**6**	**-**	**-**	**8**	**16**	
	K3	**-**	**-**	**10**	**-**	**10**	**20**	**20**
	K4	**-**	**-**	**10**	**10**	**20**	**40**	**40**
	K5	**-**	**-**	**-**	**10**	**10**	**20**	**20**
	Marks	**4**	**6**	**20**	**20**	**50**	**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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	CO1	**Up to K3**	**2**	**K1,K2**	**1**	**K1**	**2(K3&K3)**	**1(K2)**
2	CO2	**Up to K3**	**2**	**K1,K2**	**1**	**K2**	**2(K3&K3)**	**1(K3)**
3	CO3	**Up to K4**	**2**	**K1,K2**	**1**	**K2**	**2(K3&K3)**	**1(K4)**
4	CO4	**Up to K5**	**2**	**K1,K2**	**1**	**K2**	**2(K4&K4)**	**1(K5)**
5	CO5	**Up to K4**	**2**	**K1,K2**	**1**	**K2**	**2(K4&K4)**	**1(K4)**
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No.of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(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 (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	2	-	-	7	5.83	26
K2	5	8	-	10	23	19.16	
K3	-	-	30	10	40	33.33	33
K4	-	-	20	20	40	33.33	33
K5	-	-	-	10	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q.No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q.No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q.No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K3	
18) b	CO3	K3	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K4	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K4	
24	CO4	K5	
25	CO5	K4	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**DIRECT TAXES**				
Course Code	**21PCCC33**		**L**	**P**	**C**
Category	**Core**		**6**	**-**	4
Nature of course:	**EMPLOYABILITY**	✓ SKILL ORIENTED	ENTREPRENEURSHIP		

COURSE OBJECTIVES:

1. To enable the students to identify the basic concepts, definitions and terms related to Income Tax.
2. To enable the students to determine the residential status of an individual and scope of total income.
3. To enable the students to compute income under various heads namely income from salaries, house property, business/ profession, capital gains and income from other sources.
4. To enable the students to discuss the various deductions under the Income Tax Act, 1961.
5. To enable the students to compute the net total taxable income of an individual.

Unit: I	**TAX SYSTEM IN INDIA**	18

Direct taxes – Meaning – History of Income Tax Act in India – Definitions of important terms - Assessment, Assesses, Person, Income, Assessment year, Previous year capital and revenue receipts capital and revenue expenditure – Residential status – Incidence of taxation – Exempted incomes.

Unit: II	**INCOME FROM SALARIES AND HOUSE PROPERTY**	18

Computation of Taxable income from Salaries – Allowance – Perquisites – Deductions from salary – House property – Computation of income form house property – Deduction from house property income.

Unit: III	**INCOME FROM BUSINESS OR PROFESSION AND CAPITAL GAIN**	18

Computation of income from business or profession – Deduction under section 30 to 37 – Computation of capital gain – Exempted capital gain.

Unit: IV	**INCOME FROM OTHER SOURCES AND SET OFF AND CARRY FORWARD LOSS AND DEDUCTIONS**	18

Income from other sources - Dividends – Interest on securities – Types of securities – Casual income – Deductions to be made from income from other sources – Computation of gross total income – Deductions form Gross total income – Set off and Carry Forward Losses.

Unit: V	**ASSESSMENTS PROCEDURE OF INDIVIDUAL, HUF and FIRMS**	18

Tax treatment of income received from certain institutions – List of deductions –computation of tax liability – HUF – Meaning – Residence of HUF-Computation of HUF- Firms-Introduction and meaning of firm, LLP and Partners-Fulfills of condition of section.

	Total Lecture Hours	90

(80% of marks must be allotted to problem solving questions. 20% of marks must be allotted to Theory questions).

Books for Study:

1.Gaur, V.P and Narang, D.B, **Income Tax Law and Practice**, Kalyani publishers, New Delhi. (Current Edition)

Books for References:

1. Vinod Singhania.K, **Direct Taxes Law and Practice**, Taxmann Publication Private Ltd, New Delhi. (Current Edition)
2. lal.B.B,**Direct Taxes Practice and Planning**, Darling Kinderasley Private Ltd, New Delhi. (Current Edition)
3. N. Harihara, **Income Tax Law and Practice,** Tata MeGraw-Hill Publishing Company Ltd., New Delhi. (Current Edition)

Web Resources:

https://ndl.iitkgp.ac.in/

COURSE OUTCOME		**K Level**
CO1:	To know the basic concepts with regard to direct taxes	Up tok3
CO2:	To determine the income from salary of individuals also to compute the income from house property	Up tok3
CO3:	To compute the capital gains and income from business or profession	Up to k5
CO4:	To analyze the provisions for set off and carry forward of losses.	Up to k4
CO5:	To determine the taxable income of individuals	Up to k5

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	2	2	1	3	2
CO 2	3	3	3	3	2	3
CO 3	3	3	3	3	2	3
CO 4	3	3	3	3	2	3
CO 5	2	3	3	3	3	3

***3** –Advanced Application; **2 –** Intermediate Development; **1 –**Introductory Level

LESSON PLAN

UNIT	DIRECT TAXES	Hrs	Pedagogy
I	Tax System in India	18	PPT, Group Discussion, Seminar, Quiz, Assignment and Activity
II	Income from Salaries and House Property	18	
	First Internal Test –I		
III	Income from Business or Profession and Capital Gain	18	
IV	Income from other sources and Set off and carry forward loss	18	
V	Assessments procedure of Individual – HUF – Firms	18	
	Second Internal Test		

Course Designed by:

Dr. V. Suresh Babu, Assistant Professor & Dr**. S. Ganesan**, Associate Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	Up tok3	2	K1,K2	1	K1	2(K2&K2)	1(K3)
	CO2	Up tok3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
CI AII	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
	CO4	Up to k4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**SectionC (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	40
	K2	2	4	10	-	16	32	
	K3	-	-	10	20	30	60	60
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	Up tok3	2	K1,K2	1	K1	2(K3&K3)	1(K2)
2	**CO2**	Up tok3	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
5	**CO5**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	2	-	-	7	5.83	25
K2	5	8	-	10	23	19.16	
K3	-	-	20	10	30	25	25
K4	-	-	30	10	40	33.33	33
K5	-	-	-	20	20	16.67	17
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K4	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K5	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**DATABASE MANAGEMENT SYSTEM**							
Course Code	**21PCCE31**					**L**	**P**	**C**
Category	**Core Elective**					6	-	6
Nature of Course	**EMPLOYABILITY**	✓	**SKILLORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. To impart the knowledge of DBMS.
2. To familiarize the students to convert the ER-model to relational tables.
3. To improve the database design by normalization.
4. To focus on the fundamental elements of relational database management systems.
5. To develop efficient PL/SQL programs to access databases.

Unit: I	**Data, Information and Information Processing**	**18**

Introduction – Definition-History of information-Quality of information – Information Processing - Information and Enterprise. Introduction to Database Management Systems: Why a database?- Characteristics of data in a database-Database management system-Why DBMS-Types of DBMS.

Unit: II	**Entity Relationship (ER) Modeling**	**18**

Introduction-Components of an ER model-ER Modeling symbols.RDBMSTerminology: Relationaldataintegrity – Relationaldata manipulation-Codd'srules

Unit: III	**Data Normalization**	**18**

Introduction-First Normal form-Second Normal form-Third Normal form-Boyce Codd Normal form-Fourth Normal form-Fifth Normal form.

Unit: IV	**Structured Query Language(SQL)**	**18**

Introduction – History of SQL –Characteristics of SQL – Advantages of SQL – SQL Data types and Literals – Types of SQL commands- SQL Operators - Tables – Views – Indexes –Queries and Sub queries- Aggregates functions – Insert, update and delete operations- Joins and Unions

Unit: V	**Introduction to PL/SQL**	**18**

PL/SQL blocks – Variables – Data types - Control Structures - Cursor– Exceptions - Triggers – Procedures and Packages.

	Total Hours	**90**

Book for study:

1. Alexis Leon & Mathews Leon, "Fundamentals of DBMS", Second Edition, Vijay Nicole Publications, Chennai, 2014.

Books for Reference:

1. AviSilberschatz, Henry F. Korth, S. Sudarshan,"Database System Concepts",McGraw-Hill,Sixth Edition,U.P, 2016.
2. Raghurama Krishnan, Johannes Gehrke , "Database Management Systems", McGraw Hill, Third Edition, U.P, 2014.
3. Shio Kumar Singh, "Database Systems Concepts, Designs and Application", Pearson Education, Second Edition, Chennai, 2011.

Web Resources:		
1. https://www.tutorialspoint.com/dbms/index.htm 2. https://beginnersbook.com/2015/04/dbms-tutorial/ 3. https://www.tutorialcup.com/dbms		
Course Outcome		**K Level**
After the completion of the course the student will be able to,		
CO1	Gain the knowledge of DBMS.	**Up to k3**
CO2	Analyze the variations between the traditional file systems with database software and learn the significance of DBMS.	**Up to k4**
CO3	Analyze and design the importance of database security.	**Up to k4**
CO4	Construct the role of a database in supporting Web applications	**Up to k3**
CO5	Create the knowledge in database integrity.	**Up to k5**

CO & PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	**3**	**3**	**3**	**3**	**2**	**3**
CO2	**3**	**3**	**2**	**2**	**3**	**3**
CO3	**2**	**3**	**3**	**3**	**2**	**3**
CO4	**3**	**3**	**3**	**3**	**3**	**2**
CO5	**3**	**3**	**3**	**2**	**2**	**2**
Weightage	**14**	**15**	**14**	**13**	**12**	**13**

***3–**Advanced Application; **2–**Intermediate Development; **1-**Introductory Level

LESSON PLAN

UNIT	DATABASE MANAGEMENT SYSTEM	Hrs	Mode
I	**Data, Information and Information Processing** Introduction –Quality of information – Information Processing - Introductionto Database - Characteristics of data in a database- Database management system- Types of DBMS.	**18**	**L/ PPT, Chalk and Talk**
II	**Entity Relationship (ER) Modeling** Introduction - Components of an ER model-ER Modeling symbols- Relational data integrity – Relational data manipulation - Codd'srules	**18**	**L/ PPT, Chalk and Talk**
III	**Data Normalization** Introduction-First Normal form-Second Normal form-Third Normal form-Boyce Codd Normal form-Fourth Normal form-Fifth Normal form.	**18**	**L/ PPT, Chalk and Talk**
IV	**Structured Query Language(SQL)** Introduction – History of SQL –Characteristics of SQL – Advantages of SQL – SQL Data types and Literals – Types of SQL commands- SQL Operators - Tables – Views – Indexes –Queries and Sub queries- Aggregates functions – Insert, update and delete operations- Joins and Unions	**18**	**L/ PPT, Chalk and Talk, Exercise**

V	**Introduction to PL/SQL** PL/SQL blocks – Variables – Data types - Control Structures - Cursor– Exceptions - Triggers – Procedures and Packages.	**18**	**L/ PPT, Chalk and Talk, Exercise**

Course designed by: **Mrs.A.Nagaswathy,** Assistant Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K-Level**	**No. of. Questions**	**K-Level**		
CIA I	**CO1**	Up to k3	2	K1,K2	1	K1	2(K2&K2)	1(K3)
	CO2	Up to k4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
CIA II	**CO3**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K4)
	CO4	Up to k3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
Question Pattern CIA I&II		No. of Questions to Be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each Question	**1**		**2**		**5**	**10**
		Total Marks for each Section	**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I&CIA II								
	K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either / Or Choice)	Section D (Open Choice)	Total Marks	%of (Marks without choice)	Consolidate of %
CIAI	K1	2	2	-	-	4	8	40
	K2	2	4	10	-	16	32	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	10	10	20	20
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	K1	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	10	20	40	40
	K5	-	-	-		-	-	-
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K–Level	No. of Question	K–Level		
1	CO1	Up to k3	2	K1,K2	1	K1	2(K2&K3)	1(K2)
2	CO2	Up to k4	2	K1,K2	1	K2	2(K3&K3)	1(K4)
3	CO3	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K3)
4	CO4	Up to k3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
5	CO5	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1(K5)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be Answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations –Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	2	-	-	7	5.83	29
K2	5	8	5	10	28	23.33	
K3	-	-	25	20	45	37.5	38
K4	-	-	20	10	30	25	25
K5	-	-	-	10	10	8.33	8
Marks	10	10	50	50	120	100	100
NB: Higher level of performance the students is to be assessed by attempting higherlevel of K levels.							

Summative Examinations – Question Paper–Format

Section A(Multiple Choice Questions) **Answer All Questions**			**(10x1=10marks)**
Q.No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10marks)**
Q.No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C(Either/Or Type) **Answer All Questions**			**(5x5=25marks)**
Q.No	**CO**	**K Level**	**Questions**
16)a	CO1	K2	
16)b	CO1	K3	
17)a	CO2	K3	
17)b	CO2	K3	
18)a	CO3	K4	
18)b	CO3	K4	
19)a	CO4	K3	
19)b	CO4	K4	
20)a	CO5	K3	
20)b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level Of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K3	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**WEB TECHNOLOGY**					
Course Code	**21PCCE32**			**L**	**P**	**C**
Category	**Core Elective**			6	-	6
Nature of course:	EMPLOYABILITY	**SKILL ORIENTED**	✓	ENTREPRENEURSHIP		

Course Objectives:

1. To impart knowledge regarding publishing the content on the World Wide Web.
2. To introduce the basics of graphic production with a specific stress on creating graphics for the Web.
3. Students are able to develop a dynamic webpage by the use of VB script and DHTML.
4. To learn the basic tools and applications used in Web publishing.
5. Students will gain the skills and project-based experience needed for entry into web application and development careers.

Unit: I	**Introduction to Internet**	**18**

Introduction: What is Internet? – History of Internet – Internet services and Accessibility – Uses of Internet – Protocols – Web concepts – Internet Standards

HTML: Introduction - Outline of a HTML document – Head Section - Body Section - HTML Forms

Unit: II	**JAVA Script**	**18**

Introduction – Language Elements – Objects of Java Script – Other Objects – Data Object, Math Object, String Object, Regular Expressions

Unit: III	**Cascading Style Sheets (CSS)**	**18**

Coding CSS – Properties of Tags – Property values – Other style properties – Inline style sheets – Embedded Style Sheets – External Style Sheets – Grouping – Inheritance – Class as Selector – ID as Selector – Contextual Selectors – Pseudo Classes and Pseudo-elements – Positioning – Backgrounds – Element Dimensions

Unit: IV	**Extensible Mark-Up Language (XML)**	**18**

Introduction – HTML vs XML – Syntax of XML document – XML Attributes – XML DTD – Building blocks of XML Documents - DTD Elements – DTD Attributes – DTD Entities – XSL Transformation - XML Schema

Unit: V	**Java Server Pages (JSP)**	**18**

Introduction – Advantages of JSP – Developing First JSP – HTML file to JSP file – JSP sessions

Total Hours	**90**
Books for Study: 1.N.P.Gopalan, J.Akilandeswari ,**Web Technology**, PHI Learning Private Limited, New Delhi, Second Edition, July 2014.	
Books for References: AchyutGodbole,AtulKhate, Web Technologies, McGraw Hill Education private limited, New Delhi, Third Edition ,2017 Ralph Moseley,Web Technology, Wiley India, Noida, First Edition, 2016 N. P. Gopalan, T. A. Adikesavan, Web Technology: A Developer's Perspective, PHI Learning, New Delhi, 2nd Edition, 2014	
Web Resources: **1. https://www.tutorialride.com/web-technologies.htm** **2. https://www.tutorialspoint.com/internet_technologies/index.htm** **3. https://www.edureka.co/blog/web-development-tutorial**	

Course Outcomes		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand the basic concepts of web programming using HTML.	**Up To K2**
CO2	Experiment how to link pages in a website.	**Up To K3**
CO3	Point out the importance of CSS to design the web pages	**Up To K4**
CO4	Create and Test dynamic web pages by the use of JAVAscript	**Up To K5**
CO5	Analyze the web page application using client and server side	**Up To K4**

CO & PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	**2**	**3**	**2**	**3**	**2**	**2**
CO2	**3**	**3**	**3**	**3**	**2**	**3**
CO3	**3**	**3**	**3**	**3**	**2**	**2**
CO4	**3**	**3**	**3**	**2**	**3**	**3**
CO5	**3**	**3**	**3**	**2**	**3**	**3**
Weightage	**14**	**15**	**14**	**13**	**12**	**13**

***3–**Advanced Application; **2–**Intermediate Development; **1-**Introductory Level

LESSON PLAN

UNIT	WEB TECHNOLOGY	Hrs	Mode
I	**Introduction:** Internet– History of Internet – Internet services and Accessibility – Uses of Internet – Protocols – Web concepts – Internet Standards Internet Protocols: Introduction – Internet Protocols – Host Names – Internet Applications and Application Protocols	18	L/ PPT, Chalk And Talk
II	**JAVA Script:** Introduction – Language Elements – Objects of Java Script – Other Objects – Data Object, Math Object, String Object, Regular Expressions	18	L/ PPT, Chalk And Talk
III	**Extensible Mark-Up Language (XML):** Introduction – HTML vs XML – Syntax of XML document – XML Attributes – XML DTD – Building blocks of XML Documents - DTD Elements – DTD Attributes – DTD Entities – XSL Transformation - XML Schema	18	L/ PPT, Chalk and Talk
IV	**Extensible Mark-Up Language (XML):** Introduction – HTML vs XML – Syntax of XML document – XML Attributes – XML DTD – Building blocks of XML Documents - DTD Elements – DTD Attributes – DTD Entities – XSL Transformation - XML Schema	18	L/ PPT, Chalk and Talk
V	**Java Server Pages (JSP):** Introduction – Advantages of JSP – Developing First JSP – HTML file to JSP file – JSP sessions - Cookies	18	L/ PPT, Chalk and Talk

Course designed by: **Mrs.A.Nagaswathy,** Assistant Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of Questions	**K-Level**	**No. of Questions**	**K-Level**		
CIAI	**CO1**	Up to k2	2	K1,K2	1	K1	2(K2&K2)	1(K2)
	CO2	Up to k3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
CIAII	**CO3**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K3)
	CO4	Up to k5	2	K1,K2	2	K2	2(K3&K3)	1(K5)
Question Pattern CIA I&II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No.of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each Question	**1**		**2**		**5**	**10**
		Total Marks for each Section	**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I&CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either /Or Choice)**	**Section D (Open Choice)**	**TotalMarks**	**%of (Marks without choice)**	**nsolidate of %**
CIAI	**K1**	2	2	-		4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	30	60	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	10	20	40	40
	K4	-	-	10	-	10	20	20
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	30	60	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K– Level	No. of Question	K– Level		
1	**CO1**	Up to k2	2	K1,K2	1	K1	2(K2&K2)	1(K2)
2	**CO2**	Up to k3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
3	**CO3**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K4)
4	**CO4**	Up to k5	2	K1,K2	1	K2	2(K3&K4)	1(K5)
5	**CO5**	Up to k4	2	K1,K2	1	K2	2(K3&K4)	1(K4)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
Figures in parenthesis denotes ,questions should be asked with the given K level)								

Summative Examinations-Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**TotalMarks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	2	-	-	7	5.83	34
K2	5	8	10	10	33	27.5	
K3	-	-	20	10	30	25	25
K4	-	-	20	20	40	33.33	33
K5	-	-	-	10	10	8.33	8
Marks	10	10	50	50	120	100	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

Section A(Multiple Choice Questions)
Answer All Questions **(10x1=10marks)**

Q.No	CO	K Level	Questions
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	

Section B (Short Answers)
Answer All Questions **(5x2=10marks)**

Q.No	CO	K Level	Questions
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	

Section C (Either / Or Type)
Answer All Questions **(5x5=25marks)**

Q.No	CO	K Level	Questions
16)a	CO1	K2	
16)b	CO1	K2	
17)a	CO2	K3	
17)b	CO2	K3	
18)a	CO3	K4	
18)b	CO3	K4	
19)a	CO4	K3	
19)b	CO4	K4	
20)a	CO5	K3	
20)b	CO5	K4	

NB: Higher level of performance of the students is to be assessed by attempting higher level Of K levels

Section D (Open Choice)
Answer Any Three questions **(3x10=30marks)**

Q.No	CO	K Level	Questions
21	CO1	K2	
22	CO2	K3	
23	CO3	K4	
24	CO4	K5	
25	CO5	K4	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**JAVA PROGRAMMING**							
Course Code	**21PCCE33**					**L**	**P**	**C**
Category	**Elective**					**6**	**-**	**6**
Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENURSHIP			

Course Objectives:

1. To learn how to use Core Java Technologies.
2. To implement OOP Concept.
3. To get knowledge in Classes, Fundamentals, Methods, Constructors and Garbage Collections.
4. To analyze the current Thread and Synchronization.
5. To understand the concept of multi threading and exception.

Unit: I	**Java Evolution, Constants, variables and data types**	**18**

Java Features – Java Differs from C and C++ - Java and Internet. Java and World Wide Web - Web browsers – Hardware and Software Requirements – Java Support Systems – Java Environment. **Overview of Java Language:** Simple Java Program – Java Program Structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine-Command Line Arguments. **Constants, variables and data types:** Constants - Variables – Giving Values to Variables – Scope of Variables – Symbolic Constants – Type Casting.

Unit: II	**Operators and Expressions, Decision Making and Branching**	**18**

Operators and Expressions :Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators– Bitwise Operators – Special Operators – Arithmetic Expressions - Evaluation of Expressions – Precedence of Arithmetic Operators – Type Conversions in Expressions - Mathematical Functions.
Decision Making and Branching: Decision Making with If Statement – Simple if Statement – The If-Else Statement – Nesting of If-Else Statements – The Else If Ladder – The Switch Statement - The ?: Operator. **Decision Making and Looping:** The While Statement – The Do Statement – For Statement – Jumps in Loops.

Unit: III	**Classes, Objects and Methods and Arrays, Strings and Vectors**	**18**

Classes, Objects and Methods: Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members -Static Members – Nesting of Methods **Inheritance:** Extending a Class – Overriding Methods.

Arrays, Strings and Vectors: One Dimensional Array – Creating an Array - Two Dimensional Arrays – Strings – Vectors – Wrapper Classes – Enumerated Types. **Interfaces:** Multiple Inheritance - Defining Interfaces -Extending Interfaces -Implementing Interfaces – Accessing Interface Variables.

Unit: IV	**Packages and Multithreaded Programming**	**18**

Putting classes together - Java API Packages - Using System Packages – Naming Conventions – Creating Packages – Accessing a Package – Using a Package – Adding a Class to a Package **Multithreaded Programming:** Creating Threads– Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exceptions – Thread Priority – Implementing the 'Runnable' Interface.		
Unit: V	**Managing Errors and Exceptions and Applet Programming**	**18**
Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements - Using Finally Statement – Throwing Our Own Exceptions – Using Exceptions for Debugging. **Applet Programming:** How Applet Differ from Applications – Preparing to Write Applet – Building Applet Code – Applet Life Cycle – Creating an Executable Applet – Designing a Web Page – Applet Tag – Adding Applet to HTML File – Running The Applet.		
	Total Hours	**90**

Books for Study:

1. Balagurusamy. E**, Programming With Java**, Tata McGraw Hill Private Limited, Fourth Edition, 2013, New Delhi.

Books for Reference:

1. Radha Krishna. P, **Object Oriented Programming With Java**, University Press India Private Limited, 3rd Edition, 2008, Hyderabad.
2. Debasish Jana, **Java Object Oriented Programming Paradigm**, Prentice Hall of India Private Limited, 3rd Edition, 2008, New Delhi.
3. Rajiv Sharma and Vivek Sharma, **JAVA Programming by Example,** Cambridge University Press, 3rd Edition, USA

Web Resources

1. **https://www.guru99.com/java-tutorial.html**
2. **https://www.tutorialspoinnt.com/java**
3. **https://www.programiz.com/java-programming**

Course Outcome		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand the functionality of the Core Java	**Up to K2**
CO2	Apply the concept of OOP.	**Up to K3**
CO3	Apply and implementation of Thread services.	**Up to K4**
CO4	Examine the features of Applet and AWT Various applications	**Up to K4**
CO5	Develop Java program using packages, inheritance and interface.	**Up to K4**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	P 5	PO 6
CO 1	2	3	3	3	2	2
CO 2	3	3	2	3	2	3
CO 3	3	3	3	3	2	2
CO 4	3	3	3	2	3	3
CO 5	3	3	3	2	3	3
Weightage	14	15	14	13	12	13

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	HOURS	PEDAGOGY
UNIT - I	Java Features – Java Differs from C and C++ - Java and Internet. Java and World Wide Web - Web browsers – Hardware and Software Requirements – Java Support Systems – Java Environment. **Overview of Java Language:** Simple Java Program – Java Program Structure – Java Tokens – Java Statements – Implementing a Java Program – Java Virtual Machine – Command Line Arguments. **Constants, variables and data types:** Constants - Variables – Giving Values to Variables – Scope of Variables – Symbolic Constants – Type Casting.	**18**	**Chalk & Talk, Lab Exercises**
UNIT - II	Arithmetic Operators – Relational Operators – Logical Operators – Assignment Operators – Increment and Decrement Operators – Conditional Operators – Bitwise Operators – Special Operators – Arithmetic Expressions - Evaluation of Expressions – Precedence of Arithmetic Operators – Type Conversions in Expressions - Mathematical Functions. **Decision Making and Branching:** Decision Making with If Statement – Simple if Statement – The If-Else Statement – Nesting of If-Else Statements – The Else If Ladder – The Switch Statement - The ?: Operator. **Decision Making and Looping:** The While Statement – The Do Statement – For Statement – Jumps in Loops.	**18**	**Chalk&Talk, Lab Exercises**

UNIT - III	Defining a Class – Fields Declaration – Methods Declaration – Creating Objects – Accessing Class Members -Static Members – Nesting of Methods **Inheritance:** Extending a Class – Overriding Methods. **Arrays, Strings and Vectors::** One Dimensional Array – Creating an Array - Two Dimensional Arrays – Strings – Vectors – Wrapper Classes – Enumerated Types. **Interfaces:** Multiple Inheritance - Defining Interfaces -Extending Interfaces -Implementing Interfaces – Accessing Interface Variables.	**18**	**Chalk&Talk, Exercises**
UNIT - IV	Putting classes together - Java API Packages - Using System Packages – Naming Conventions – Creating Packages – Accessing a Package – Using a Package – Adding a Class to a Package **Multithreaded Programming:** Creating Threads– Stopping and Blocking a Thread – Life Cycle of a Thread – Using Thread Methods – Thread Exceptions – Thread Priority – Implementing the 'Runnable' Interface.	**18**	**Chalk & Talk Lab exercises**
UNIT - V	Types of Errors – Exceptions – Syntax of Exception Handling Code – Multiple Catch Statements - Using Finally Statement – Throwing Our Own Exceptions – Using Exceptions for Debugging. **Applet Programming:** How Applet Differ from Applications – Preparing to Write Applet – Building Applet Code – Applet Life Cycle – Creating an Executable Applet – Designing a Web Page – Applet Tag – Adding Applet to HTML File – Running The Applet.	**18**	**Chalk & Talk, Lab Exercises**

Course Designed by: Mrs.T.ThivyaSindhu, Assistant Professor

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K-Level**	**No. of. Questions**	**K-Level**		
CIA I	**CO1**	Up to K2	2	K1,K2	1	K1	2(K2&K2)	1(K2)
	CO2	Up to K3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
CIA II	**CO3**	Up to K4	2	K1,K2	1	K2	2(K4&K4)	1(K4)
	CO4	Up to K4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I&II		No. of Questions to Be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each Question	**1**		**2**		**5**	**10**
		Total Marks for each Section	**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I&CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**%of (Marks without choice)**	**Consolidate of %**
CIAI	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	-	-	-	2	4	20
	K2	2	6	-	-	8	16	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	20	30	60	60
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K–Level	No. of Question	K–Level		
1	**CO1**	Up to k2	2	K1,K2	1	K1	2(K2&K2)	1(K2)
2	**CO2**	Up to k3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
3	**CO3**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K3)
4	**CO4**	Up to k4	2	K1,K2	1	K2	2(K3&K3)	1(K4)
5	**CO5**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1(K4)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be Answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations –Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	2	-	-	7	5.8	33.3
K2	5	8	10	10	33	27.5	
K3	-	-	20	10	30	25	25
K4	-	-	20	30	50	41.7	41.7
K5	-	-	-				-
Marks	10	10	50	50	120	100	100
NB: Higher level of performance the students is to be assessed by attempting higher level of K levels.							

Summative Examinations – Question Paper–Format

Section A(Multiple Choice Questions) **Answer All Questions**			**(10x1=10marks)**
Q.No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10marks)**
Q.No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C(Either/Or Type) **Answer All Questions**			**(5x5=25marks)**
Q.No	**CO**	**K Level**	**Questions**
16)a	CO1	K2	
16)b	CO1	K3	
17)a	CO2	K3	
17)b	CO2	K3	
18)a	CO3	K4	
18)b	CO3	K4	
19)a	CO4	K3	
19)b	CO4	K4	
20)a	CO5	K3	
20)b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level Of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30marks)**
Q.No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K3	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**DATABASE MANAGEMENT SYSTEM - LAB**			
Course Code	**21PCCEP1**	**L**	**P**	**C**
Category	**Core Elective**	-	6	6

Nature of course:	**EMPLOYABILITY**	✓	**SKILLORIENTED**	✓	ENTREPRENEURSHIP

Course Objectives:

1. To understand a good formal foundation on the relational model of data
2. To summarize the concepts and techniques relating to query processing by SQL engines
3. To understand various advanced queries execution.
4. To build students in Database design
5. To familiarize the students to send an entire block of statements to the database at one time using PL/SQL.

List of Programs:

1. Create an employee table in my SQL.
2. Using DML commands
3. Create a table of student mark list having the following fields:
   name, regno, mark1, mark2, mark3, total, average, result.
   a) Insert minimum 10records
   b) Query to find total, avg,result
4. Create an electricity bill table which has the following fields:
   Customer name, customer no, previous meter reading, current meter reading, units consumed, type,and amount.
   a) Insert minimum 10records
   b) Query to find units consumed
   c) Query to find the amount where type=house rs.5 per unit, type=office rs.8 per unit, type=factory rs.12 per unit
5. Create a simple interest and compound interest table using mySQL
6. Create a table of personal detail with the required fields
7. Create a table of employee details with the required fields
8. Queries for set operators
9. Queries using Aggregate functions
10. View creation and manipulation
11. PL/SQL Program to Find Factorial of a Number
12. PL/SQL Program to Print Table of a Number
13. PL/SQL Program for Reverse of a Number
14. PL/SQL Program for Fibonacci Series
15. PL/SQL Program to Check Number is Odd or Even

	Total Hours	**90**

COURSE OUTCOMES		K Level
After the completion of the course the student will be able to,		
CO1	Understand and apply the concepts of database technologies	**Up To K3**
CO2	Apply a query to the database using SQL DML/DDL commands	**Up To K3**
CO3	Analyze, select storage and recovery techniques of database system	**Up To K4**
CO4	Apply the basic concepts of Database Systems and Applications	**Up ToK3**
CO5	Analyze the concepts of PL/SQL which gives high productivity	**Up To K4**

CO&PO Mappings:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO 1	**3**	**3**	**3**	**2**	**2**	**2**
CO 2	**3**	**3**	**3**	**2**	**2**	**3**
CO 3	**2**	**2**	**3**	**3**	**3**	**2**
CO 4	**3**	**3**	**2**	**3**	**3**	**3**
CO 5	**3**	**3**	**3**	**2**	**3**	**3**
Weightage	**14**	**14**	**14**	**12**	**13**	**13**

***3–**Advanced Application;**2–**Intermediate Development;**1-**Introductory Level

LESSON PLAN

DATABASE MANAGEMENT SYSTEM LAB	Hrs	Mode
Create an employee table in mySQL.	6	LAB -PRACTICAL
Using DML commands	6	
Create a table student mark list having the following fields: name, regno, mark1, mark2, mark3, total, average, result.	6	
Create an electricity bill table which have the following fields: Customer name, customer no, previous meter reading, current meter reading, units consumed, type, amount.	6	
Create a simple interest and compound interest table using mySQL	6	
Create a table of personal detail with the required fields	6	
Create a table of employee details with the required fields	6	
Queries for set operations	6	
Queries using Aggregate functions	6	
View creation and manipulation	6	
PL/SQL Program to Find Factorial of a Number	6	
PL/SQL Program to Print Table of a Number	6	
PL/SQL Program for Reverse of a Number	6	
PL/SQL Program for Fibonacci Series	6	
PL/SQL Program to Find Factorial of a Number	6	
PL/SQL Program to Check Number is Odd or Even	6	

Course Designed by: **Mrs. A. Nagaswathy**, Assistant Professor.

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**WEB TECHNOLOGY-LAB**							
Course Code	**21PCCEP2**					**L**	**P**	**C**
Category	**Elective**					-	6	6
Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. To understand the syntax and semantics of HTML
2. To develop the ability to logically plan and develop web pages.
3. To familiarize the students to separate style from content, and a well-defined set of published Standards.
4. To build students to create forms and check for data accuracy
5. To develop skills in analyzing the usability of a website.

	1. Write a HTML program for formatting text. 2. Write a HTML program for creating ordered, unordered and definition list. 3. Write a HTML Program to use Image as a Link. 4. Create Your Class Time Table Using HTML. 5. Write a program to design Login form in HTML. 6. Create a web page that has blinking text. 7. Write a program in JAVA script to add two integers. 8. Write a JAVA script program to print the content of the current window. 9. Write a JAVA script program to compute the values. 10. Write an internal CSS program. 11. Write an external CSS program. 12. Create a simple CSS style sheet to display your XML data. 13. Write a simple JSP program to print the current date and time. 14. Write a program in JSP to auto refresh a page. 15. Write a program in JSP to set the cookies for the first and the last name. **Total Hours**	**90**

Course Outcomes		**K Level**
After the completion of the course the student will be able to,		
CO1	Understand and apply the various tags in HTML programs.	**Up To K3**
CO2	Apply knowledge in developing web applications.	**Up To K3**
CO3	Analyze a web page and identify its elements and attributes.	**Up To K4**
CO4	Assess a web page using HTML and Cascading Style sheets.	**Up To K5**
CO5	Analyze and apply the role of languages like HTML, CSS, and JAVA Script protocols in the workings of web and web applications.	**Up To K4**

CO &PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO 1	3	2	3	2	2	2
CO 2	3	3	3	3	3	3
CO 3	3	3	2	2	3	3
CO 4	3	3	3	3	2	3
CO 5	2	3	3	2	3	2
Weightage	14	14	14	12	13	13

***3**–Advanced Application; **2**–Intermediate Development; **1**-Introductory Level

LESSON PLAN

WEB TECHNOLOGY LAB	Hrs	Mode
Write a HTML program for formatting text.	6	LAB - PRACTICAL
Write a HTML program for creating ordered, unordered and definition list.	6	
Write a HTML Program to use Image as a Link.	6	
Create Your Class Time Table Using HTML.	6	
Write a program to design Login form in HTML.	6	
Create a web page that has blinking text.	6	
Write a program in JAVA script to add two integers.	6	
Write a JAVA script program to print the content of the current window.	6	
Write a JAVA script program to compute the values.	6	
Write an internal CSS program.	6	
Write an external CSS program.	6	
Create a simple CSS style sheet to display your XML data.	6	
Write a simple JSP program to print the current date and time.	6	
Write a program in JSP to auto refresh a page.	6	
Write a program in JSP to set the cookies for the first and the last name.	6	

Course Designed by: Mrs. A. Nagaswathy, Assistant Professor.

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**JAVA PROGRAMMING- LAB**							
Course Code	**21PCCEP3**					**L**	**P**	**C**
Category	**Elective**					-	6	6
Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENURSHIP			

Course Objectives:

1. To impart hands on experience with Java programming
2. To understand the fundamentals of object-oriented programming in Java, including managing classes, objects, invoking methods etc and exception handling mechanisms.
3. To gain knowledge about basic Java language syntax and semantics to write Java programs and use concepts such as variables, conditional and iterative execution methods etc.
4. To develop Java programs using Packages, Inheritance and Interface
5. To identify, Design & develop complex Graphical user interfaces

List of Programs:

1. Java program to display Welcome message.
2. Java program to demonstrate Command line arguments
3. Java program to demonstrate Scanner(I/O Streams)
4. Java program to demonstrate BufferedReader (I/O Streams)
5. Java program to demonstrate Arrays.
6. Java program to find both the largest and smallest number in a list of integers.
7. Java program that prints all real solutions to the quadratic equation $ax^2 + bx + c = 0$. Read in a, b, c and use the quadratic formula. If the discriminant b2 -4ac is negative, display a message stating that there are no real solutions.
8. Java program that uses both recursive and non recursive functions to print the n^{th} value in the Fibonacci sequence.
9. Java program to multiply two given matrices.
10. Java Program that reads a line of integers, and then displays each integer, and the sum of all the integers (Use StringTokenizer class of java.util)
11. Java program that checks whether a given string is palindrome or not.
12. Java program to sort a list of names in ascending order.
13. Java Program to illustrate the concept of class with Constructor overloading
14. Java program to illustrate the concept of class with Method overloading
15. Java program to illustrate the concept of Single inheritance
16. Java program to illustrate the concept of Multi level inheritance
17. Java program to illustrate user defined packages.
18. Java program using Interfaces.
19. Java program to implement the concept of exception handling
20. Java program to illustrate the concept of threading using Thread Class
21. Java program to illustrate the concept of threading using runnable Interface.
22. Java program for handling Mouse events
23. Develop an applet that displays a simple message
24. Develop an applet that displays lines, rectangles, ovals, square etc.
25. Write a Java program to illustrate GUI Components using AWT.

Total Hours	**90**

COURSE OUTCOME		K Level
After the completion of the course the student will be able to,		
CO1	Apply object oriented programming features and concepts for solving given problem.	Up To K3
CO2	Use the syntax and semantics of java programming language and basic concepts of OOP.	Up To K3
CO3	Develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages.	Up To K5
CO4	Create Multithreaded programs.	Up To K5
CO5	Develop graphical user interface using AWT.	Up To K5

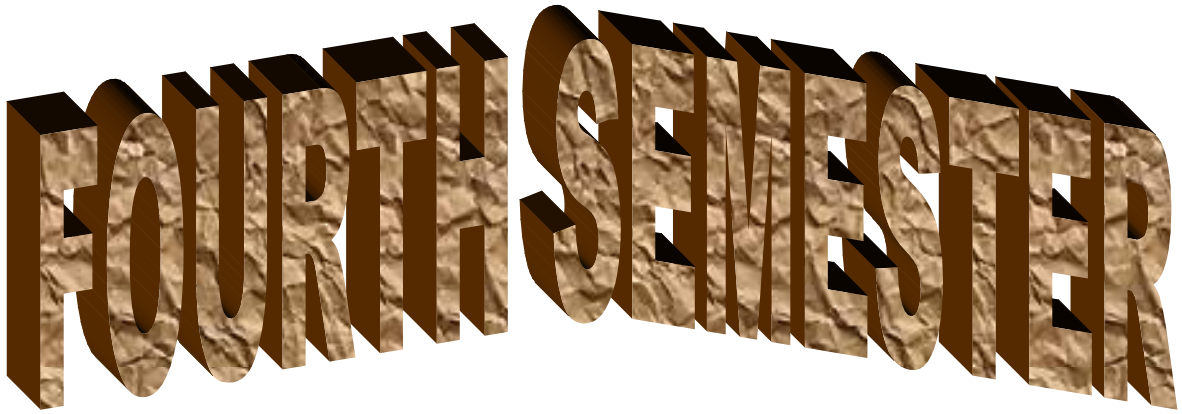
CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	3	3	2	3	2
CO 2	2	3	3	3	2	2
CO 3	3	2	3	2	3	3
CO 4	3	3	2	3	3	3
CO 5	3	3	3	2	2	3
Weightage	14	14	14	12	13	13

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

EXERCISES	Hrs	Mode
1. Java program to display Welcome message. 2. Java program to demonstrate Command line arguments 3. Java program to demonstrate Scanner(I/O Streams) 4. Java program to demonstrate Buffered Reader (I/O Streams) 5. Java program to demonstrate Arrays.	18	Laboratory experiments
6. Java program to find both the largest and smallest number in a list of integers. 7. Java program that prints all real solutions to the quadratic equation $ax^2 + bx + c = 0$. Read in a, b, c and use the quadratic formula. If the discriminant b2 -4ac is negative, display a message stating that there are no real solutions. 8. Java program that uses both recursive and non recursive functions to print the n^{th} value in the Fibonacci sequence. 9. Java program to multiply two given matrices. 10. Java Program that reads a line of integers, and then displays each integer, and the sum of all the integers (Use StringTokenizer class of java.util)	18	Laboratory experiments
11. Java program that checks whether a given string is palindrome or not. 12. Java program to sort a list of names in ascending order. 13. Java Program to illustrate the concept of class with Constructor overloading 14. Java program to illustrate the concept of class with Method overloading 15. Java program to illustrate the concept of Single inheritance	18	Laboratory experiments
16. Java program to illustrate the concept of Multi level inheritance 17. Java program to illustrate user defined packages. 18. Java program using Interfaces. 19. Java program to implement the concept of exception handling 20. Java program to illustrate the concept of threading using Thread Class	18	Laboratory experiments
21. Java program to illustrate the concept of threading using runnable Interface. 22. Java program for handling Mouse events 23. Develop an applet that displays a simple message 24. Develop an applet that displays lines, rectangles, ovals, square etc. 25. Write a Java program to illustrate GUI Components using AWT.	18	Laboratory experiments


FOURTH SEMESTER

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**INDIRECT TAX**					
Course Code	**21PCCC41**			**L**	**P**	**C**
Category	**Core**			6	-	4
Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENEURSHIP		

COURSE OBJECTIVES:

1. To enable the students to explain the basic concepts, definitions and terms related to Goods and Services Tax (GST).
2. To enable the students to discuss the concepts of supply along with the rules related to time, place and value of supply.
3. To enable the students discuss the compliance related to documentation under the new indirect tax regime.
4. To enable the students to compute the Goods and Services Tax (GST) payable by a supplier after considering the eligible input tax credit.
5. To enable the students analyze the persons liable for registration and the persons not required to obtain registration under the GST Law.

Unit: I	**INTRODUCTION TO TAX SYSTEM AND GST**	**18**

Meaning- Features - Objectives of Taxation- Types of taxes- Direct and Indirect taxes - Indirect Tax structure-Merits and Demerits of Indirect Taxes- Recent Developments in Indirect Taxes- Goods and Services Tax Act 2016 - Introduction – Features – Benefits of GST Act.

Unit: II	**GOODS AND SERVICE TAX**	**18**

Important Definitions – GST Council - Taxable persons – Levy and collection of GST – Forward and Reverse Charge - Time, Place and Value of supply of goods and services – Administrative set up – Classes of officers under Central and State goods and services Tax Act - Appointment of Officers – Powers of officers –Powers to grant exemption from tax.

Unit: III	**REGISTRATION AND INPUT TAX CREDIT**	**18**

Procedure for registration under Schedule III – Special provisions relating to casual taxable person and non-resident taxable person – Composite Scheme - Amendment of registration – Cancellation of registration – Revocation of cancellation of registration- ITC Provisions - Blocked Credit.

Unit: IV	**GST RETURNS**	**18**

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 – E-Invoice- E-Way Bill – Credit and Debit Notes – Payment of Tax – Tax Deducted at Source – Electronic Commerce – Definitions - Collection of Tax at source.

Unit: V	**CUSTOMS ACT 1962**	**18**

Meaning– 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: **1.** Goods & Services Tax and Customs Law: As Per Choice Based Credit System (CBCS) Syllabus. by *CA. Rohini* Aggarawal and *Dr. Neelam* Goel, Sultan Chand & Sons. (Current Edition)		
Books for References: 1. S.S.Gupta, "GST Law & Practice", Taxman Publication Pvt Ltd, New Delhi. (Current Edition) 2. V.S.DATEY., "ALL About GST", Taxman Publication Pvt Ltd, New Delhi. (Current Edition)		
Web Resources:		
1.https://ndl.iitkgp.ac.in/ **2.https://onlinecourses.swayam2.ac.in/nou19_cm05/preview**		
COURSE OUTCOME		**K Level**
CO1:	To teach the features, and benefits of GST	**Up tok3**
CO2:	To enable students to learn important definitions on GST	**Up tok3**
CO3:	To learn the registration procedure relating to GST	**Up to k5**
CO4:	To teach the various aspects of assessment of GST	**Up to k4**
CO5:	To learn the important provisions of GST	**Up to k5**

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**2**	**2**	**1**	**3**	**2**
CO 2	**3**	**3**	**3**	**3**	**2**	**3**
CO 3	**3**	**3**	**3**	**3**	**2**	**3**
CO 4	**3**	**3**	**3**	**3**	**2**	**3**
CO 5	**2**	**3**	**3**	**3**	**3**	**3**

***3** –Advanced Application; **2** – Intermediate Development; **1** –Introductory Level

LESSON PLAN

Unit	INDIRECT TAX	Hrs	Pedagogy
I	**Introduction to tax system and GST**	**18**	**PPT, Group Discussion, Seminar, Quiz, Assignment and Activity**
II	**Goods and service tax**	**18**	
III	**Registration and Input Tax Credit**	**18**	
IV	**GST Returns**	**18**	
V	**Customs Act 1962**	**18**	

Course Designed by:
Dr. V. Suresh Babu, Assistant Professor & Dr**. S. Ganesan**, Associate Professor.

Learning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)								
Internal	**Cos**	**K Level**	**Section A MCQs**		**Section B Short Answers**		**Section C Either or Choice**	**Section D Open Choice**
			No. of. Questions	**K - Level**	**No. of. Questions**	**K – Level**		
CIAI	**CO1**	Up tok3	2	K1,K2	1	K1	2(K2&K2)	1(K3)
	CO2	Up tok3	2	K1,K2	2	K2	2(K3&K3)	1(K2)
CI AII	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1(K5)
	CO4	Up to k4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**SectionC (Either /Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	4	6	20	20	50	100	100
CIAII	**K1**	2	2	-	-	4	8	20
	K2	2	4	-	-	6	12	
	K3	-	-	10	-	10	20	20
	K4	-	-	10	10	20	40	40
	K5	-	-	-	10	10	20	20
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K – Level	No. of Question	K – Level		
1	**CO1**	Up tok3	2	K1,K2	1	K1	2(K3&K3)	1(K2)
2	**CO2**	Up tok3	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
3	**CO3**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
4	**CO4**	Up to k4	2	K1,K2	1	K2	2(K4&K4)	1 (K4)
5	**CO5**	Up to k5	2	K1,K2	1	K2	2(K4&K4)	1 (K5)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	Section A (Multiple Choice Questions)	Section B (Short Answer Questions)	Section C (Either/ or Choice)	Section D (Open Choice)	Total Marks	% of (Marks without choice)	Consolidated %
K1	5	1	-	-	7	5.83	25
K2	5	4	-	1	23	19.16	
K3	-	-	4	1	30	25	25
K4	-	-	6	1	40	33.33	33
K5	-	-	-	2	20	16.67	17
Marks	10	10	50	50	120	100	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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K3	
17) b	CO2	K3	
18) a	CO3	K4	
18) b	CO3	K4	
19) a	CO4	K4	
19) b	CO4	K4	
20) a	CO5	K4	
20) b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K5	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**ADVANCED FINANCIAL MANAGEMENT**					
Course Code	**21PCCC42**			**L**	**P**	**C**
Category	**Core**			6	-	4
Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENEURSHIP		

COURSE OBJECTIVES:

1. To understand the theoretical framework of financial management in business corporations.
2. To make an in depth analysis of various sources of financing and financial planning.
3. To impart knowledge of managing assets of the company.
4. To apply appropriate tools to take long term financial decision.
5. To know about leverage and dividend policy.

Unit: I	**BASICS OF FINANCE & TIME VALUE OF MONEY**	18

Financial management –Scope, Uses and Functions of Financial management – objective of Financial Management - Organization of Finance Function – Emerging Role of Finance Manager in India – Financial management & other functional areas –Time value of Money – Discounting and compounding techniques - Practical Applications of Discounting and compounding techniques.

Unit: II	**LONG –TERM INVESTMENT DECISION**	18

Capital Budgeting – Nature – Evaluation Techniques – Traditional Techniques –Average Rate of Return, Pay Back Period – Time-Adjusted techniques – Net Present Value – Internal Rate of Return – Benefit Cost Ratio – Project selection under Capital Rationing – Inflation and Capital Budgeting

Unit: III	**COST OF CAPITAL**	18

Cost of capital – Importance –Explicit and Implicit costs – Measurement of Specific Costs – Cost of Debt –Cost of Preference Share – Cost of Equity Capital – Cost of Retained Earnings – Computation of Overall Cost of Capital.

Unit: IV	**CURRENT ASSET MANAGEMENT**	18

Receivables Management: Objectives – Costs – Benefits – Credit policies – Credit Terms – Credit analysis - Collection policies –Decision tree Analysis of credit granting – monitoring & control of receivables – Inventory management - Objectives of inventory management – Benefits of holding Inventory - Techniques of Inventory management – EOQ - Just in Time inventory system – ABC analysis – Inventory turnover ratios — VED analysis – FSND analysis – Min-Max Method – Perpetual Inventory system – Automatic Order system – Input- Output ratio analysis.

Unit: V	**LEVERAGES AND DIVIDEND POLICY**	18

Leverage- Types - Operating leverage – degree of Operating leverage – Financial leverage – Degree of financial leverage- Combined leverage – EBIT/EPS Analysis - Dividend policy and practices – Dividend policies – Factors determining Dividend policy – Dividend Theories – Graham, Walter, Gordon and Modigliani -Miller theories.

	Total Lecture Hours	90

Books for Study:

1. Maheswari S N, Financial Management, Sultan Chand & Sons, New Delhi, 2016.

Books for References:

1.Murthy A, Financial Management, Margam Publications, Chennai, 2016.
2. Khan M Y and Jain P K, Financial management, Text, Problems and cases, Tata McGraw Hill, New Delhi, 2018.
3.Pandey I M, Financial Management, Vikas Publishing House, Mumbai, 2017.
4. Periyasamy, Financial Management, Vijay Nicole Imprints, Chennai, 2016.
5. Prasanna Chandra, , Financial Management, 7th edition, Tata McGraw Hill, New Delhi, 2018.
6. Tulsian P C, Financial Management, S.Chand & Company, New Delhi, 2016

Web Resources:

1.http://www.csun.edu/~zz1802/Finance%20303/Web-Stuff/Lecture-Notes-Mid1.pdf
2.https://www.academia.edu/37058427/Financial_Management_Class_Notes
3. https://www.studocu.com/in/document/mahatma-gandhi-university/financial-management/financial-management-lecture-notes-1-3/7368379
4.https://www.iare.ac.in/sites/default/files/lecture_notes/IARE_FM_Lecture%20_Notes_2-converted.pdf

COURSE OUTCOME		K Level
CO1:	Gain an understanding of the theoretical framework of financial management in business corporations	Up To K3
CO2:	Apply the tools of Capital budgeting and	Up To K5
CO3:	Determine cost of capital to analyze the long-term profitability of the company.	Up To K3
CO4:	Apply tools to manage inventories & receivables.	Up To K4
CO5:	Identify the procedures in formulating dividend policies of the companies	Up To K2

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	2	2	3	2	2
CO 2	3	3	3	3	3	3
CO 3	3	3	3	3	3	3
CO 4	3	3	3	3	3	3
CO 5	2	2	2	2	2	2

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

Unit	ADVANCED FINANCIAL MANAGEMENT	Hrs	Pedagogy
I	Basics of Finance & Time Value of Money	18	Lecture, PPT
II	Long –Term Investment Decision	18	Lecture, PPT
III	Cost of Capital	18	Lecture, PPT
IV	Current Asset Management	18	Lecture, PPT
V	Leverages and Dividend Policy	18	Lecture, PPT

Course Designed by:
Dr. K. Bala Sathya, Assistant Professor & **Dr.V.Geetha,** Assistant Professor

earning Outcome Based Education & Assessment (LOBE)Formative Examination - Blue Print Articulation Mapping – K Levels with Course Outcomes (COs)

Internal	Cos	K Level	Section A MCQs		Section B Short Answers		Section C Either or Choice	Section D Open Choice
			No. of. Questions	K - Level	No. of. Questions	K – Level		
CIAI	CO1	Up to K3	2	K1,K2	1	K2	2(K2&K2)	1(K3)
	CO2	Up to K5	2	K1,K2	2	K2	2(K5&K5)	1(K4)
CI AII	CO3	Up to K3	2	K1,K2	1	K2	2(K2&K2)	1(K3)
	CO4	Up to K4	2	K1,K2	2	K2	2(K3&K3)	1(K4)
Question Pattern CIA I & II		No. of Questions to be asked	**4**		**3**		**4**	**2**
		No. of Questions to be answered	**4**		**3**		**2**	**1**
		Marks for each question	**1**		**2**		**5**	**10**
		Total Marksfor each section	**4**		**6**		**10**	**10**

***Note:** It is the decision of the course teacher to ask 2 Questions in any unit under section-B (short answer questions)

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**SectionC (Either / Or Choice)**	**SectionD (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**nsolidateof %**
CIAI	**K1**	2	-	-	-	2	4	40
	K2	2	6	10	-	18	36	
	K3	-	-	-	10	10	20	20
	K4	-	-	-	10	10	20	20
	K5	-	-	10	-	10	20	20
	Marks	**4**	**6**	**20**	**20**	**50**	**100**	**100**
CIAII	**K1**	2	-	-	-	2	4	40
	K2	2	6	10	-	18	36	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	10	10	20	20
	K5	-	-	-	-	-	-	-
	Marks	**4**	**6**	**20**	**20**	**50**	**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**	**MCQs**		**Short Answers**		**Section C (Either / or Choice)**	**Section D (Open Choice)**
			No. of Questions	**K – Level**	**No. of Question**	**K - Level**		
1	CO1	Up to K3	2	K1&K2	1	K2	2(K3&K3)	1(K3)
2	CO2	Up to K5	2	K1&K2	1	K2	2(K4&K4)	1(K5)
3	CO3	Up to K3	2	K1&K2	1	K2	2(K2&K2)	1(K3)
4	CO4	Up to K4	2	K1&K2	1	K2	2(K3&K3)	1(K4)
5	CO5	Up to K2	2	K1&K2	1	K2	2(K2&K2)	1(K2)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(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 (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5		-	-	5	4.2	**42**
K2	5	10	20	10	45	37.5	
K3	-	-	20	20	40	33.3	**33**
K4	-	-	10	10	20	16.7	**17**
K5	-	-	-	10	10	8.3	**8**
Marks	**10**	**10**	**50**	**50**	**120**	**100**	**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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K2	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K3	
16) b	CO1	K3	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K2	
18) b	CO3	K2	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K2	
20) b	CO5	K2	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K3	
22	CO2	K5	
23	CO3	K3	
24	CO4	K4	
25	CO5	K2	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROJECT**					
Course Code	**21PCOPR1**			**L**	**P**	**C**
Category	**Core**			6	-	4
Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENEURSHIP		

Course Outcomes

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

1: Develop the ability of the students to prepare a project.
2: Give the practical exposure in the field of commerce and business
3: Skill Development Course
4: Develops Entrepreneurship skill.

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.

Internal

Presentation Submission	**40**

External

Project Report Viva Voce	**60**
Total	**- 100**

COURSE OUTCOME		**K Level**
CO1:	Develop the ability of the students to prepare a project.	**UP TO K4**
CO2:	Give the practical exposure in the field of commerce and business.	**UP TO K4**
CO3:	Skill Development & Able to take business decisions by taking research	**UP TO K3**
CO4:	Develops skills for Entrepreneurship	**UP TO K4**
CO5:	Develop the ability to analyze and to prepare report	**UP TO K4**

CO & PO Mapping:

CO's	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**2**	**2**	**3**	**2**	**2**
CO 2	**3**	**3**	**3**	**3**	**3**	**3**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**
CO 4	**2**	**3**	**3**	**2**	**3**	**3**
CO 5	**2**	**2**	**2**	**2**	**2**	**2**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING IN PYTHON**			
Course Code	**21PCCE41**	**L**	**P**	**C**
Category	**Elective**	6	-	6

Nature of course:	**EMPLOYABILITY**	✓	SKILL ORIENTED	ENTREPRENURSHIP

Course Objectives:

1. Getting knowledge about the features of Python programming language.
2. Apply various data types and control structure
3. To learn how to write loops and decision statements in Python.
4. To learn how to use lists, tuples, and dictionaries in Python programs.
5. Experience and use modern object-oriented programming paradigm.

Unit: I	**18**

The way of the Program: Program Basics – Running Python – The first program – Arithmetic operators – values and types – Formal and Natural languages.
Variables, Expressions and Statements: Assignment statements – Variable names – Expressions and Statements – Script mode – Order of operations – String operations – Comments.

Unit: II	**18**

Functions : Function calls – Math functions – Composition – Adding new functions – Definitions and uses – Flow of Execution – Parameters and arguments – Local Variables and parameters – Stack diagrams – Fruitful functions and Void functions – Why functions .
Conditionals and Recursion: Floor division and modulus – Boolean expressions – Logical operators – Conditional execution – Alternative execution – Chained conditionals – Nested conditionals – Recursion.

Unit: III	**18**

Iteration: Reassignment – Updating variables – The while statement – Break – Square Roots.
Strings: String - Len – Traversal with a for loop – String Slices - Immutable Strings – Searching – Looping and counting – String methods – the in operator – String Comparison.

Unit: IV	**18**

Lists: List – Mutable list – Traversing a list – List operations – List Slices – List methods.
Dictionaries: Dictionary – Dictionary as a collection of counters – Looping and Dictionaries – reverse lookup – Dictionaries and Lists.
Tuples: Tuple – Tuple assignment – Tuples as return values – Variable length argument tuples – List and Tuples

Unit: V	**18**

Data Analysis with Pandas-The Pandas data structure-The essential basic functionality-Indexing and selecting data-Computational tools-Working with missing data-Advanced uses of Pandas for data analysis
Data Visualization-Exploring plot types--Legends and annotations-Plotting functions with Pandas-Additional Python data visualization tools

Total Lecture Hours	**90 Hrs**

Books for Study:

1. Think Python, Allen B.Downey, Shroff Publishers & Distributors Pvt. Ltd.,Fifth Indian Reprint, August 2018.
2.Getting started with Python DataAnalysis-,Phuong Vo. T.H., MartinCzygan, Packt Publishing ,2011

Books for References:

1. Python for Data Analysis, Wes McKinney, Shroff Publishers & Distributors Pvt. Ltd., Fourth Indian Reprint, October 2018.
2. Mark Lutz. Beijing, Learning Python, Cambridge, O'Reilly Media, Inc, Fourth Edition.
3. David Beazley, Brian K.Jones, Python Cookbook: Recipes for Mastering Python3, O'Reilly' Media Inc, Third Edition.

Web Resources:

1. **https://www.w3schools.com/python/python_intro.asp**
2. **https://www.geeksforgeeks.org/python-language-introduction/**
3. **https://www.udemy.com/pythonforbeginnersintro/**

Course Outcomes		**K Level**
CO1:	Understand the core Syntax and Semantics of Python Programming language and write simple logical problems.	**Up To K3**
CO2:	Learn and Apply the concept of function, Conditionals and Recursion in Python Programming.	**Up To K3**
CO3:	Analyze the various string operations and While operations.	**Up To K4**
CO4:	Make use of Lists, Dictionaries, Tuples to build real time applications	**Up To K4**
CO5:	Integrate and Solve complex problems using Object Oriented Programming concepts in Python.	**Up To K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	3	2	3	2	2
CO 2	3	3	3	3	3	3
CO 3	3	3	2	3	3	3
CO 4	3	3	2	2	3	3
CO 5	3	2	3	2	3	2
Weightage	15	14	12	13	14	13

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	HOURS	PEDAGOGY
UNIT - I	**The way of the Program:** Program Basics – Running Python – The first program – Arithmetic operators	5	Chalk & Talk, Presentation
	values and types– Formal and Natural languages.	5	
	Variables, Expressions and Statements: Assignment statements – Variable names	3	
	Expressions and Statements – Script mode – Order of operations – String operations – Comments.	5	
UNIT - II	**Functions :** Function calls – Math functions – Composition – Adding new functions – Definitions and uses – Flow of Execution – Parameters and arguments	5	Practical Demonstration, Exercise
	Local Variables and parameters – Stack diagrams – Fruitful functions and Void functions – Why functions	5	
	Conditionals and Recursion: Floor division and modulus – Boolean expressions – Logical operators	3	
	Conditional execution – Alternative execution – Chained conditionals – Nested conditionals – Recursion.	5	
UNIT - III	**Iteration:** Reassignment – Updating variables – The while statement	5	Chalk & Talk, Assignment
	Break – Square Roots- **Strings:** String - Len – Traversal with a for loop – String Slices - Immutable Strings	5	
	Searching– Looping and counting – String methods	5	
	The in operator – String Comparison.	3	
UNIT - IV	**Lists:** List – Mutable list – Traversing a list – List operations – List Slices – List methods	5	Chalk & Talk Group Discussion
	Dictionaries: Dictionary – Dictionary as a collection of counters	5	
	– Looping and Dictionaries – reverse lookup – Dictionaries and Lists.	3	
	Tuples: Tuple – Tuple assignment – Tuples as return values – Variable length argument tuples – List and Tuples.	5	
UNIT - V	**Data Analysis with Pandas-**The Pandas data structure-The essential basic functionality-Indexing and selecting data	5	PPT, Assignment
	-Computational tools-Working with missing data-Advanced uses of Pandas for data analysis	3	
	Data Visualization-Exploring plot types--	5	

	Legends and annotations-		
	Plotting functions with Pandas-Additional Python data visualization tools	**5**	

Course Designed by:
Dr.B.Vijaya Lakshmi, Assistant Professor, **Dr.S.Bharanisethupandian,** Assistant Professor

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K - Level**	**No. of. Questions**	**K - Level**		
CI AI	**CO1**	UptoK3	2	K1,K2	1	K2	2(K2&K2)	1(K3)
	CO2	UptoK3	2	K1,K2	2	K1,k2	2(K3&K3)	1(K2)
CI AII	**CO3**	UptoK4	2	K1,K2	1	K2	2(K3&K3)	1 (K3)
	CO4	UptoK4	2	K1,K2	2	K2,K1	2(K2&K2)	1(K4)
Question Pattern CIA I & II	No. of Questions to be asked		**4**		**3**		**4**	**3**
	No. of Questions to be answered		**4**		**3**		**2**	**2**
	Marks for each question		**1**		**2**		**5**	**10**
	Total Marks for each section		**4**		**6**		**10**	**20**

Distribution of Marks with K Level CIA I & CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidate of %**
CIA I	**K1**	2	2		-	4	**8**	**60**
	K2	2	4	10	10	26	**52**	
	K3	-	-	10	10	20	**40**	**40**
	K4	-	-	-	-	-	**-**	**-**
	K5	-	-	-	-	-	**-**	**-**
	Marks	4	6	20	10	50	**100**	**100**
CIA II	**K1**	2	2	-	-	4	**8**	**60**
	K2	2	4	10	-	16	**52**	
	K3	-	-	10	10	20	**40**	**40**
	K4	-	-	-	10	20	**40**	**40**
	K5	-	-	-	-	-	**-**	**-**
	Marks	4	6	20	10	50	**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**	**MCQs**		**Short Answers**		**Section C (Either / or Choice)**	**Section D (Open Choice)**
			No. of Questions	**K – Level**	**No. of Question**	**K - Level**		
1	CO1	UptoK2	2	K1,K2	1	K2	2(K2&K2)	1(K2)
2	CO2	UptoK3	2	K1,K2	1	K1	2(K3&K3)	1(K3)
3	CO3	UptoK4	2	K1,K2	1	K2	2(K2&K2)	1(K3)
4	CO4	UptoK4	2	K1,K2	1	K2	2(K2&K2)	1(K4)
5	CO5	UptoK3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(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 (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	-	-	-	5	4.2	42
K2	5	10	20	10	45	37.5	
K3	-	-	20	20	40	33.3	33
K4	-	-	10	20	30	25	25
Marks	**10**	**10**	**50**	**50**	**120**	**100**	**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

Section A (Multiple Choice Questions) **Answer All Questions**			**(10x1=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10 marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K2	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C (Either/Or Type) **Answer All Questions**			**(5 x 5 = 25 marks)**
Q. No	**CO**	**K Level**	**Questions**
16) a	CO1	K2	
16) b	CO1	K2	
17) a	CO2	K4	
17) b	CO2	K4	
18) a	CO3	K3	
18) b	CO3	K3	
19) a	CO4	K3	
19) b	CO4	K3	
20) a	CO5	K2	
20) b	CO5	K2	
NB: Higher level of performance of the students is to be assessed by attempting higher level of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30 marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K4	
24	CO4	K4	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING WITH PHP**							
Course Code	**21PCCE42**					**L**	**P**	**C**
Category	**Elective**					6	-	6
Nature of course:	**EMPLOYABILITY**	✓	**SKILL ORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. Gain thorough knowledge to design and develop dynamic, database-driven web applications using PHP
2. Understand server-side programming works on the web.
3. Explain the difference between a programming language and a scripting language.
4. Formulate, design and create PHP control structures, including selection.
5. Design a complete server using PHP concepts.

Unit: I	**Introducing PHP**	
History – Unique Features – Basic development Concepts – Creating first PHP Script **Using Variable and Operators:** Storing Data in Variables – Understanding PHP's Data Types – Setting and Checking Variable Data types – Using Constants – Manipulating Variables with Operators – Handling Form Input.		**18**
Unit: II	**Controlling Program Flow**	
Writing Simple Conditional Statements – Writing More Complex Conditional Statements – Repeating Actions with Loops – Working with String and Numeric Functions. **Working with Arrays:** Storing Data in Arrays – Processing Arrays with Loops and Iterations – Using Arrays with Forms – Working with Array Functions.		**18**
Unit: III	**. Using Functions and Classes**	
Creating User-defined Functions – Creating Classes – Using Advanced OOP Concepts. **Working with Files and Directories:** Reading Files – Writing Files – Processing Directories.		**18**
Unit: IV	**Working with Database and SQL**	
Introducing Database and SQL – Using MySQL – Adding and modifying Data – Handling Errors – Using SQL Lite Extension and PDO Extension.		**18**
Unit: V	**Working with XML**	
Introducing XML – Using PHP's Simple XML Extension – Using PHP's DOM Extension.		**18**
	Total Hours	**90**

Books for Study:

1. PHP A Beginner's Guide , VIKRAM VASWANI, Tata McGraw-Hill

Books for References:

1. The PHP Complete Reference – Steven Holzner – Tata McGraw-Hill Edition.
2. Spring into PHP5 – Steven Holzer, Tata McGraw Hill Edition

Web Resources

1. **https://www.javatpoint.com/php-tutorial**
2. **https://www.phptpoint.com/php-tutorial/**

3. https://www.w3resource.com/php/php-home.php		
Course Outcome		**K Level**
After the completion of the course the student will be able to,		
CO1:	Understand how server-side programming works on the web.	**Up To K2**
CO2:	Explain the difference between a programming language and a scripting language.	**Up To K3**
CO3:	Formulate, design and create PHP control structures, including selection and iterative structures.	**Up To K4**
CO4:	Distinguish PHP as a server side programming language	**Up To K3**
CO5:	Design a complete server using PHP concepts.	**Up To K3**

CO & PO Mapping:

COS	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	**3**	**3**	**2**	**3**	**2**	**3**
CO 2	**3**	**3**	**3**	**2**	**3**	**2**
CO 3	**3**	**3**	**2**	**3**	**3**	**2**
CO 4	**3**	**3**	**2**	**2**	**3**	**3**
CO 5	**3**	**2**	**3**	**3**	**3**	**3**
Weightage	**15**	**14**	**12**	**13**	**14**	**13**

***3 –** Advanced Application; **2 –** Intermediate Development; **1 -** Introductory Level

LESSON PLAN

UNIT	COURSE NAME	HOURS	PEDAGOGY
UNIT - I	**Introducing PHP :** History – Unique Features - Basic development Concepts – Creating first PHP Script	5	Chalk &Talk, PPT
	Using Variable and Operators : Storing Data in Variables –	3	
	Understanding PHP's Data Types – Setting and Checking Variable Data types	5	
	Using Constants – Manipulating Variables with Operators – Handling Form Input	5	
UNIT - II	**Controlling Program Flow:** Writing Simple Conditional Statements - Writing More Complex Conditional Statements	5	Chalk &Talk, Exercise
	Repeating Actions with Loops – Working with String and Numeric Functions	3	
	Working with Arrays: Storing Data in Arrays – Processing Arrays with Loops and Iterations	5	
	Using Arrays with Forms - Working with Array Functions.	5	
UNIT - III	**Using Functions and Classes:** Creating User-defined Functions - Creating Classes	6	Chalk &Talk, Assignment
	Using Advanced OOP Concepts.	6	
	Working with Files and Directories: Reading Files - Writing Files - Processing Directories	6	
UNIT - IV	**Working with Database and SQL :** Introducing Database and SQL - Using MySQL	6	Chalk &Talk Group Discussion
	Adding and modifying Data - Handling Errors	6	
	Using SQL Lite Extension and PDO Extension	6	
UNIT - V	**Working with XML:** Introducing XML	6	Chalk &Talk, PPT
	Using PHP's Simple XML Extension	6	
	Using PHP's DOM Extension	6	

Course Design By:
Dr. S. Bharanisethupandian, Assistant Professor, **& Dr. B.Vijayalakshmi,** Assistant Professor

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of. Questions	**K-Level**	**No. of. Questions**	**K-Level**		
CIA I	**CO1**	UptoK2	2	K1,K2	1	K1	2(K2)	1(K2)
	CO2	UptoK3	2	K1,K2	2	K2	2(K3)	1(K3)
CIA II	**CO3**	UptoK4	2	K1,K2	1	K2	2(K4)	1(K4)
	CO4	UptoK3	2	K1,K2	2	K2	2(K3)	1(K3)
Question Pattern CIA I&II		No. of Questions to Be asked	**4**		**3**		**4**	**3**
		No. of Questions to be answered	**4**		**3**		**2**	**2**
		Marks for each Question	**1**		**2**		**5**	**10**
		Total Marks for each Section	**4**		**6**		**10**	**20**

Distribution of Marks with K Level CIA I&CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / Or Choice)**	**Section D (Open Choice)**	**Total Marks**	**%of (Marks without choice)**	**Consolidate of %**
CIAI	**K1**	2	2	-	-	4	8	60
	K2	2	4	10	10	26	52	
	K3	-	-	10	10	20	40	40
	K4	-	-	-	-	-	-	-
	K5	-	-	-	-	-	-	-
	Marks	**4**	**6**	**20**	**20**	**60**	100	100
CIAII	**K1**	2	-	-	-	2	**4**	**20**
	K2	2	6	-	-	8	**16**	
	K3	-	-	10	10	20	**40**	**40**
	K4	-	-	10	10	30	**60**	**60**
	K5	-	-	-	-	-	-	-
	Marks	**4**	**6**	**20**	**10**	**50**	**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 components. Marks as part of CIA

Summative Examination–Blue Print Articulation Mapping–K Level with Course Outcomes(COs)								
S. No	Cos	K–Level	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K–Level	No. of Question	K–Level		
1	**CO1**	UptoK2	2	K1,K2	1	K1	2(K2)	1(K2)
2	**CO2**	Upto K3	2	K1,K2	1	K2	2(K3)	1(K3)
3	**CO3**	UptoK4	2	K1,K2	1	K2	2(K4)	1(K4)
4	**CO4**	UptoK3	2	K1,K2	1	K2	2(K3)	1(K3)
5	**CO5**	UptoK3	2	K1,K2	1	K2	2(K3)	1(K3)
No. of Questions to be Asked			**10**		**5**		**10**	**5**
No. of Questions to be Answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations –Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either/ or Choice)**	**Section D (Open Choice)**	**Total Marks**	**% of (Marks without choice)**	**Consolidated %**
K1	5	2	-	-	7	6	33
K2	5	8	10	10	33	27	
K3	-	-	30	30	60	50	50
K4	-	-	10	10	20	17	17
K5	-	-	-	-	-	-	-
Marks	10	10	50	50	120	100	100
NB: Higher level of performance the students is to be assessed by attempting higher level of K levels.							

Summative Examinations – Question Paper–Format

Section A(Multiple Choice Questions) **Answer All Questions**			**(10x1=10marks)**
Q. No	**CO**	**K Level**	**Questions**
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	
Section B (Short Answers) **Answer All Questions**			**(5x2=10marks)**
Q. No	**CO**	**K Level**	**Questions**
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	
Section C(Either/Or Type) **Answer All Questions**			**(5x5=25marks)**
Q. No	**CO**	**K Level**	**Questions**
16)a	CO1	K2	
16)b	CO1	K3	
17)a	CO2	K3	
17)b	CO2	K3	
18)a	CO3	K4	
18)b	CO3	K4	
19)a	CO4	K3	
19)b	CO4	K4	
20)a	CO5	K3	
20)b	CO5	K4	
NB: Higher level of performance of the students is to be assessed by attempting higher level Of K levels			
Section D (Open Choice) **Answer Any Three questions**			**(3x10=30marks)**
Q. No	**CO**	**K Level**	**Questions**
21	CO1	K2	
22	CO2	K3	
23	CO3	K3	
24	CO4	K4	
25	CO5	K5	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING IN VB.NET**							
Course Code	**21PCCE43**					**L**	**P**	**C**
Category	**Elective**					6	-	6
Nature of Course	**EMPLOYABILITY**	✓	**SKILLORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. To impart the knowledge of design, formulate, and construct applications with VB.NET.
2. To implement lists and loops with VB.NET controls and iteration.
3. To familiarize the students to do separate operations into appropriate VB.NET procedures and methods.
4. To focus on assembling multiple forms, modules, and menus into working VB.NET solutions.
5. To develop VB.NET programs using multiple array techniques

Unit: I	**.NET Framework and VB.NET**	**18**

Introduction - Overview of the .NET Framework - VB.NET Language - Development of a simple VB.NET Program.
Features in VS.NET: Introduction - Start Page - The IDE Main Window - Class View Window -
Object Browser - Code Window - Compiling the Code - Code Debugging - Developing a Simple
VB.NET Console Application through Visual Studio IDE.

Unit: II	**Variables, Operators and Control Statement**	**18**

Value Types and Reference Types - Variable Declaration and Initialization - Value Data Types -
Boxing and Unboxing - Arithmetic Operators
Control Statement: If Statement - - Select.. Case Statement - While Statement - Do Statement - For Statement- For each statement

Unit: III	**Methods and Arrays**	**18**

Classes, Properties, and Indexers: Definition and Usage of a Class - Constructor Overloading Types of Methods - Arrays - One-dimensional Array - Multidimensional Arrays – Jagged Array
Event handling: Mouse Events – Keyboard Events.

Unit: IV	**Button Controls and Strings**	**18**

Button Controls: Text Box Control - Label Control - Button Control-Radio Button Control - Checkbox Control – Group Box Control – List Box Control – Checked List Box Control – Combo box Control Strings: Creating a string object -Properties of the string class – Methods of string class.

Unit: V	**Database Connectivity**	**18**

Advantages of ADO.NET - Managed Data Providers - Developing a Simple ADO.NET Based Application - Creation of a Data Tables - Retrieving Data from Tables - Table Updating - Disconnected Data Access Through Dataset Object.
Total Hours **90**
Book for study: V.Christy, Programming in VB.Net, Laxmi Publications, First Edition, Chennai, 2015.
Books for Reference: 1. Dave Grundgeiger, Programming Visual Basic .NET, - O'Reilly 2. C.Muthu, Visual Basic. Net, McGraw Hill Education, New Delhi, First Edition, 2008. 3. Jeffrey R. Shapiro ,Visual Basic .NET The Complete Reference, McGraw Hill Education, 4. New Delhi, First Edition, 2009.
Web Resources:
1. https://books.goalkicker.com/VisualBasic_NETBook **2. https://www.pdfdrive.com/complete-reference-vbnet-d19382767.html** **3. https://www.tutorialspoint.com/vb.net/index.htm**

Course Outcome		**K Level**
After the completion of the course the student will be able to,		
CO1	Understandthe.NET Framework and explain some of the main enhancements to the new edition of Visual Basic	**Up to K4**
CO2	Prepare the fundamental structure of a Visual Basic.NET project and use main features of the integrated development environment (IDE)	**Up to K3**
CO3	Illustrate applications using Microsoft Windows Form.	**Up to K3**
CO4	Evaluate applications that use ADO.NET.	**Up to K5**
CO5	Manipulate on Assemblies and Deployment in .NET, Mobile Applications Development.	**Up to K3**

CO & PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	**3**	**3**	**3**	**2**	**3**	**3**
CO2	**3**	**3**	**2**	**3**	**1**	**2**
CO3	**1**	**2**	**3**	**3**	**3**	**3**
CO4	**3**	**3**	**3**	**3**	**3**	**3**
CO5	**3**	**3**	**3**	**3**	**2**	**3**

***3**–Advanced Application; **2**–Intermediate Development; **1**-Introductory Level

LESSON PLAN

UNIT	PROGRAMMING IN VB.NET	Hrs	Mode
I	**.NET FRAMEWORK AND VB.NET** Introduction - Overview of the .NET Framework - VB.NET Language - Development of a simpleVB.NET Program.Features in VS.NET: Introduction - Start Page - The IDE Main Window - Class View Window - Object Browser - Code Window - Compiling the Code - Code Debugging - Developing a Simple VB.NET Console Application through Visual Studio IDE.	18	PPT, Chalk &Talk
II	**Variables, Operators and Control Statements** Value Types and Reference Types - Variable Declaration and Initialization - Value Data Types - Boxing and Unboxing - Arithmetic Operators Control Statement: If Statement - - Select.. Case Statement - While Statement - Do Statement - For Statement- For each statement	18	PPT, Chalk& Talk
III	**Methods and Arrays** Classes, Properties, and Indexers: Definition and Usage of a Class - Constructor Overloading Types of Methods - Arrays - One-dimensional Array - Multidimensional Arrays – Jagged Array Event handling: Mouse Events – Keyboard Events.	18	PPT, Chalk & Talk
IV	**Button Controls and Strings** Button Controls: TextBox Control - Label Control - Button Control-RadioButton Control - Checkbox Control - GroupBox Control - ListBox Control – CheckedListBox Control - Combobox Control Strings: Creating a string object -Properties of the string class – Methods of string class.	18	PPT, Chalk & Talk
V	**Database connectivity** Advantages of ADO.NET - Managed Data Providers - Developing a Simple ADO.NET Based Application - Creation of a Data Tables - Retrieving Data from Tables - Table Updating – Disconnected DataAccess Through Dataset Object.	18	PPT, Chalk &Talk

Course designed by: **Mrs. A. Nagaswathy, Assistant** Professor.

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**		**Section C Either or Choice**	**Section D Open Choice**
			MCQs		**Short Answers**			
			No. of Questions	**K-Level**	**No. of Questions**	**K-Level**		
CIAI	**CO1**	UpToK4	2	K1,K2	1	K1	2(K4&K4)	1(K4)
	CO2	UpToK3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
CIAII	**CO3**	UpToK3	2	K1,K2	2	K2	2(K3&K3)	1(K3)
	CO4	UpToK5	2	K1,K2	1	K2	2(K4&K4)	1(K5)
Question Pattern CIA I&II	No. of Questions to be asked		**4**		**3**		**4**	**2**
	No. of Questions to be answered		**4**		**3**		**2**	**1**
	Marks for each Question		**1**		**2**		**5**	**10**
	Total Marks for each Section		**4**		**6**		**10**	**10**

Distribution of Marks with K Level CIA I& CIA II								
	K Level	**Section A (Multiple Choice Questions)**	**Section B (Short wAnswer Questions)**	**Section C (Either / Or Choice)**	**Section D(Open Choice)**	**Total Marks**	**%of(Marks without cchoice)**	**Consolidate of %**
CIAI	**K1**	2	2	-	-	4	8	**20**
	K2	2	4	-	-	6	12	
	K3	-	-	10	10	20	40	**40**
	K4	-	-	10	10	20	40	**40**
	K5	-	-	-	-	-	-	**-**
	Marks	4	m 6	20	20	50	100	**100**
CIAII	**K1**	2	2	-	-	4	8	**20**
	K2	2	4	-	-	6	12	
	K3	-	-	10	10	20	40	**40**
	K4	-	-	10	-	10	20	**20**
	K5	-	-	-	10	10	20	**20**
	Marks	4	6	20	20	50	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	MCQs		Short Answers		Section C (Either / or Choice)	Section D (Open Choice)
			No. of Questions	K–Level	No. of Question	K–Level		
1	**CO1**	UpToK4	2	K1,K2	1	K1	2(K4&K4)	1(K4)
2	**CO2**	UpToK3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
3	**CO3**	UpToK3	2	K1,K2	1	K2	2(K3&K3)	1(K2)
4	**CO4**	UpToK5	2	K1,K2	1	K2	2(K4&K4)	1(K5)
5	**CO5**	UpToK3	2	K1,K2	1	K2	2(K3&K3)	1(K3)
No. of Questions to be asked			**10**		**5**		**10**	**5**
No. of Questions to be Answered			**10**		**5**		**5**	**3**
Marks for each question			**1**		**2**		**5**	**10**
Total Marks for each section			**10**		**10**		**25**	**30**
(Figures in parenthesis denotes, questions should be asked with the given K level)								

Summative Examinations - Distribution of Marks with K Level							
K Level	**Section A (Multiple Choice Questions)**	**Section B (Short Answer Questions)**	**Section C (Either / or Choice)**	**Section D (Open Choice)**	**Total Marks**	**%of (Marks without choice)**	**Consolidated %**
K1	5	2	-	-	7	5.83	25
K2	5	8	-	10	23	19.17	
K3	-	-	30	20	50	41.67	42
K4	-	-	20	10	30	25	25
K5	-	-	-	10	10	8.33	8
Marks	10	10	50	50	120	100	100
NB: Higher level of performance the students is to be assessed by attempting higherlevel of K levels.							

Summative Examinations –Question Paper–Format

Section A (Multiple Choice Questions)
Answer All Questions **(10x1=10marks)**

Q. No	CO	K Level	Questions
1	CO1	K1	
2	CO1	K2	
3	CO2	K1	
4	CO2	K2	
5	CO3	K1	
6	CO3	K2	
7	CO4	K1	
8	CO4	K2	
9	CO5	K1	
10	CO5	K2	

Section B (Short Answers)
Answer All Questions **(5x2=10marks)**

Q. No	CO	K Level	Questions
11	CO1	K1	
12	CO2	K2	
13	CO3	K2	
14	CO4	K2	
15	CO5	K2	

Section C (Either / Or Type)
Answer All Questions **(5x5 =25marks)**

Q. No	CO	K Level	Questions
16)a	CO1	K4	
16)b	CO1	K4	
17)a	CO2	K3	
17)b	CO2	K3	
18)a	CO3	K3	
18)b	CO3	K3	
19)a	CO4	K4	
19)b	CO4	K5	
20)a	CO5	K3	
20)b	CO5	K3	

NB: Higher level of performance of the students is to be assessed by attempting higher level Of K levels

Section D (Open Choice)
Answer Any Three questions **(3x10=30marks)**

Q. No	CO	K Level	Questions
21	CO1	K4	
22	CO2	K3	
23	CO3	K2	
24	CO4	K5	
25	CO5	K3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING IN PYTHON - LAB**					
Course Code	**21PCCEP4**			**L**	**P**	**C**
Category	**Part – III Core Elective**			-	6	6
Nature of Course	**EMPLOYABILITY**	✓	SKILLORIENTED	ENTREPRENEURSHIP		

Course Objectives:

Create Python Programs for Simple applications
Develop web applications using Python.
To understand the high-performance programs designed to strengthen the practical expertise.
To be able to introduce core programming basics and program design with functions using Python programming language.
Infer the Supported data Structure like lists, Dictionaries and tuples in python

List of Programs:

Python program to Shutdown Computer immediately
Python program to Shutdown Computer in given time.
Python program to restart the computer .
Python Program for simple interest
Python Program to check Armstrong Number
Python Program for n-th Fibonacci number
Python Program to find largest element in an array
Python Program to Split the array and add the first part to the end
Reverse words in a given String in Python
. Python program to Check if a Sub-string is Present in a Given String
. String slicing in Python to rotate a string
. Python program to interchange first and last elements in a list
. Python program to Reverse a List
. Python program to swap two elements in a list
. Python program to find the sum of all items in a dictionary
. Python program to Find the size of a Tuple
. Python program to Adding Tuple to List and vice – versa
. Python program to Genetrate text Captcha .
. Python program to Genetrate random Captcha
. Creating Pandas data frame
. Load the CSV data from the system and display it through pandas
. Create Data Frame from dict of narray or list
. Create a line plot using pandas
. Create a Bar plot using pandas
. Create a histogram plot using pandas

Total Lecture Hours	**75**

Course Outcome		K Level
COURSE OUTCOME		
CO1	Understand conditionals, loops and functions in Python.	**Up To K4**
CO2	Make use of lists, dictionary and tuples in Python.	**Up To K3**
CO3	Compare various sorting techniques and Use it in various applications.	**Up To K4**
CO4	Compile the importance of using command line arguments.	**Up To K2**
CO5	Create, analyze and determine Python programs for various applications.	**Up To K3**

CO & PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	**3**	**3**	**3**	**3**	**3**	**2**
CO2	**3**	**2**	**3**	**3**	**3**	**3**
CO3	**2**	**3**	**3**	**3**	**2**	**2**
CO4	**2**	**3**	**3**	**2**	**2**	**3**
CO5	**2**	**3**	**2**	**3**	**3**	**3**

***3–**Advanced Application; **2–**Intermediate Development; **1-**Introductory Level

LESSON PLAN

Ex. No	COURSE CONTENT	HOURS	PEDAGOGY
1.	Python Program for simple interest	4	LAB-PRACTICAL
2.	Python Program to check Armstrong Number	4	
3.	Python Program for n-th Fibonacci number	4	
4.	Python Program to find largest element in an array	4	
5.	Python Program to Split the array and add the first part to the end	4	
6.	Reverse words in a given String in Python	4	
7.	Python program to Check if a Substring is Present in a Given String	4	
8.	String slicing in Python to rotate a string	4	
9.	Python program to interchange first and last elements in a list	4	
10.	Python program to Reverse a List	4	
11.	Python program to swap two elements in a list	4	
12.	Python program to find the sum of all items in a dictionary	4	
13.	Python program to Find the size of a Tuple	4	
14.	Python program to Adding Tuple to List and vice – versa	4	
15.	Creating Pandas data frame	4	
16.	Load the CSV data from the system and display it through pandas	3	
17.	Create Data Frame from dict of n array or list	3	
18.	Create Data Frame from dict of n array or list	3	
19.	Create a Bar plot using pandas	3	
20.	Create a histogram plot using pandas	3	

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING WITH PHP – LAB**							
Course Code	**21PCCEP5**					**L**	**P**	**C**
Category	**Elective**					-	6	6
Nature of Course	**EMPLOYABILITY**	✓	**SKILLORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. Design and develop dynamic, database-driven web applications using PHP
2. Get hands on experience on various techniques of web development and will be able to design and develop a complete website.
3. Apply and analyze PHP programs to design real life problems.
4. Examine the use of PHP programming that uses SQL tables.
5. Design PHP programs using parsing functions.

List of Programs:

1.Write a PHP program to reverse given number.
2. Write a PHP program to print table of a number.
3. Write a PHP program to print Fibonacci series without using recursion and using recursion.
4. Write a PHP program to swap two numbers with and without using third variable.
5. Write a PHP program to print alphabet triangle.
6. Develop a PHP program using controls and functions
7. Develop a PHP program and check message passing mechanism between pages.
8. Develop a PHP program using String function and Arrays.
9. Develop a PHP program to display student information using MYSQL table.
10. Develop a PHP program to design a college application form using MYSQL table.
11. Develop a PHP program using parsing functions (use Tokenizing)
12. Develop a PHP program and check Regular Expression, HTML functions, Hashing functions.
13. Develop a PHP program and check File System functions, Network functions, and Date and time functions.
14. Develop a PHP program using session
15. Develop a PHP program using cookie and session

Total Lecture Hours	**90**

COURSE OUTCOME		K Level
CO1	Understand the basic concepts of PHP programming.	Up To K2
CO2	Apply and analyze PHP programs to design real life problems.	Up To K3
CO3	Examine the use of PHP programming that uses SQL tables.	Up To K4
CO4	Design PHP programs using parsing functions.	Up To K3
CO5	Assess regular expressions and hashing functions in PHP language.	Up To K3

CO & PO Mapping:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO1	3	3	3	3	3	3
CO2	2	3	3	3	2	3
CO3	2	3	2	3	3	2
CO4	2	2	3	3	3	2
CO5	3	3	3	2	2	3

***3–**Advanced Application; **2–**Intermediate Development; **1-**Introductory Level

LESSON PLAN

UNIT	COURSE CONTENT	HOURS	PEDAGOGY
UNIT - I	Write a PHP program to reverse given number.	6	LAB-PRACTICAL DEMO
	Write a PHP program to print table of a number.	6	
	Write a PHP program to print Fibonacci series without using recursion and using recursion.	6	
UNIT - II	Write a PHP program to swap two numbers with and without using third variable.	6	
	Write a PHP program to print alphabet triangle.	6	
	Develop a PHP program using controls and functions	6	
UNIT - III	Develop a PHP program and check message passing mechanism between pages.	6	
	Develop a PHP program using String function and Arrays.	6	
	Develop a PHP program to display student information using MYSQL table.	6	
UNIT - IV	Develop a PHP program to design a college application form using MYSQL table.	6	
	Develop a PHP program using parsing functions (use Tokenizing)	6	
	Develop a PHP program and check Regular Expression, HTML functions, Hashing functions.	6	
UNIT - V	Write a PHP Code to make database connection, Create Data Base, Create Table In Mysql	6	
	Study Of MYSQL Data Base Operation Write a PHP code Insert, Delete, Update, Select the Data From Data Base	6	
	Design A form which upload And Display Image in PHP, Design A Login Form and Validate that Form using PHP Programming	6	

Course Designed By: Dr.S.Bharanisethupandian, Assistant Professor

MANNAR THIRUMALAI NAICKER COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMMERCE WITH COMPUTER APPLICATIONS
(For those who join in 2021-2022 and after)

Course Name	**PROGRAMMING IN VB.NET-LAB**							
Course Code	**21PCCEP6**					**L**	**P**	**C**
Category	**Elective**					-	6	6
Nature of course:	**EMPLOYABILITY**	✓	**SKILLORIENTED**	✓	ENTREPRENEURSHIP			

Course Objectives:

1. To build Windows applications using structured and object-based programming techniques
2. To separate operations into appropriate VB.NET procedures and functions.
3. To translate general requirements into data-related solutions using .NET concepts
4. To build students to develop Windows desktop applications.
5. To gain the knowledge to do the project.

LIST OF PROGRAMS

1.Write VB.NET code to declare a variable to store the age of a person.
2. Write VB.NET code to prompt a user to input his/her name.
3.Write VB.NET code to shutdown, restart, logoff the computer.
4.Write a VB.NET program to determine whether an input number is an even number.
5.Write a VB.NET program that determines a student's grade.
6.Write a VB.NET program to prompt the user to choose the correct answer from a list of answer choices of a question.
7.Write a VB.NET program to handle mouse events.
8.Write a VB.NET program to a handle keyboard events.
9.Design a form to create digital clock.
10.Design form to select image from list and display it in the picture box.
11.Write a VB.NET program to string manipulation.
12.Write VB.NET program to sort the array in descending order.
13.Design a form to open and save files using menus.
14.Design student progress report.
15.Design a registration form with Database ADO.NET connection.

	Total Hours	**90**

Course Outcomes		K Level
After the completion of the course the student will be able to,		
CO1	Understand the simple application using various controls in VB. NET.	Up To K2
CO2	Analyze and apply an application in VB. Net with the array object.	Up T oK4
CO3	Apply the web controls in an application.	Up To K3
CO4	Manipulate data in a database in ADO.Net Environment.	Up To K3
CO5	Compile the project report.	Up To K5

CO & PO Mappings:

COS	PO1	PO2	PO3	PO4	PO5	PO6
CO 1	3	3	3	2	2	1
CO 2	2	3	2	3	3	3
CO 3	2	3	3	3	3	3
CO 4	3	2	3	3	2	3
CO 5	2	3	3	3	3	3

***3–**Advanced Application; **2–**Intermediate Development; **1-**Introductory Level

LESSON PLAN

PROGRAMMING IN VB.NET-LAB	Hrs	Mode
Write VB.NET code to declare a variable to store the age of a person.	6	LAB - PRACTICAL
Write VB.NET code to prompt a user to input his/her name.	6	
Write VB.NET code to shut down, restart, logoff the computer.	6	
Write a VB.NET program to determine whether an input number is an even number.	6	
Write a VB.NET program that determines a student's grade.	6	
Write VB.NET program to prompt the user to choose the correct answer from a list of answer choices of a question.	6	
Write a VB.NET program to handle mouse events.	6	
Write a VB.NET program to handle keyboard events.	6	
Design a form to create digital clock.	6	
Design form to select image from list and display it in the picture box.	6	
Write a VB.NET program to string manipulation.	6	
Write VB.NET program to sort the array in descending order.	6	
Design a form to open and save files using menus.	6	
Design student progress report.	6	
Design a registration form with Database ADO.NET connection.	6	

Course Designed by: **Mrs.A.Nagaswathy,** Assistant Professor