

DEPARTMENT OF COMPUTER SCIENCE

COURSE STRUCTURE & SYLLABI (For the students admitted from year 2023-2024 onwards)

**Programme: POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS
(PGDCA)**



JAMAL MOHAMED COLLEGE (AUTONOMOUS)
Accredited with A++ Grade by NAAC (4th Cycle) with CGPA 3.69 out of 4.0
(Affiliated to Bharathidasan University)
TIRUCHIRAPPALLI – 620 020

POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS (PGDCA)

Sem	Course Code	Course Category	Course Title	Ins. Hrs/Week	Credit	Marks		Total
						CIA	ESE	
I	23PDCA1CC1	Core - I	Programming in C	6	4	25	75	100
	23PDCA1CC2	Core - II	Principles of Accountancy	6	4	25	75	100
	23PDCA1CC3	Core - III (A)	Office Automation	4	3	10	40	50
	23PDCA1CC3P	Core - III (B)	Office Automation Lab - Practical	2	1	10	40	50
	23PDCA1CC4	Core - IV (A)	Editing Tools	4	3	10	40	50
	23PDCA1CC4P	Core - IV (B)	Editing Tools Lab - Practical	2	1	10	40	50
	23PDCA1CC5P1	Core - V (A)	C Programming Lab - Practical	3	2	10	40	50
	23PDCA1CC5P2	Core - V (B)	Accounting Package Lab - Practical	3	2	10	40	50
	Total			30	20			500
II	23PDCA2CC6	Core - VI	Visual Programming	6	4	25	75	100
	23PDCA2CC7	Core - VII (A)	Database Management Systems	4	3	10	40	50
	23PDCA2CC7P	Core - VII (B)	RDBMS Lab - Practical	2	1	10	40	50
	23PDCA2CC8	Core - VIII (A)	Shell Programming	4	3	10	40	50
	23PDCA2CC8P	Core - VIII (B)	Shell Programming Lab - Practical	2	1	10	40	50
	23PDCA2CC9	Core - IX	Web Design	6	4	25	75	100
	23PDCA2CC10P1	Core - X (A)	Web Design Lab - Practical	3	2	10	40	50
	23PDCA2CC10P2	Core - X (B)	Visual Programming Lab - Practical	3	2	10	40	50
	Total			30	20			500
	Grand Total			40				1000

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC1	Core – I	6	4	25	75	100
Course Title		PROGRAMMING IN C					

SYLLABUS		
Unit	Contents	Hours
I	Getting Started with C - C Instructions – Decision Control Structure: The if Statement – The if-else Statement - Use of Logical Operators - Use of Logical Operators – *The Conditional Operators * .	18
II	Loop Control Instruction – Loops – The while Loop – The for Loop – The break Statement – The continue Statement – The do-while Loop – The odd Loop – Decisions using switch – *The goto keyword*	18
III	Functions: Passing Values between Functions – Scope Rule of Functions – *Using Library Functions* . Pointers: Call by Value and Call by Reference – An Introduction to Pointers – Pointer Notation.	18
IV	Arrays – Pointers and Arrays – Multidimensional Arrays: Two-Dimensional Arrays – Arrays of Pointers – *Three- Dimensional Array* – Strings – Pointers and Strings – Standard Library String Functions	18
V	Structures –File Input / Output – Data Organization – File Operations – Counting Characters, Tabs, Spaces – A File- Copy Program – File Opening Modes – *Record I/O in Files* .	18

..... Self Study

Text Book(s):
1. Yashavant Kanetkar, Let Us C, BPB Publications, New Delhi, Nineteenth Edition, 2022.
Reference Book(s):
1. E. Balagurusamy, Programming in ANSI C, Tata McGraw Hill Education Private Ltd., Fifth Edition, 2011.
2. D. Ravichandran, <i>Programming in C</i> , New Age International (P) Ltd., First Edition, 1996.
Web Resource(s):
1. https://www.programiz.com/c-programming

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Use C language as the base for higher level course in programming	K1, K2
CO2	Acquire the basic constructs of programming languages.	K3
CO3	Apply structured approach in program design	K4
CO4	Apply suitable logic in solving problems	K4
CO5	Develop applications to solve real world problems	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.12
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Dr. O.S. Abdul Qadir

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC2	CORE – II	6	4	25	75	100
Course Title		PRINCIPLES OF ACCOUNTANCY					

SYLLABUS		
Unit	Contents	Hours
I	Definition of Accounting – Meaning and Objects – Accounting Concepts and Conventions – Double Entry System – Advantages and Disadvantages – Difference between Double Entry System and Single Entry System	18
II	Journal – Transaction Analysis for Journal entries – Ledger - Account – Posting of Journal to Ledger – Balancing of Ledger Accounts – * Distinction between Journal and Ledger *.	18
III	Subsidiary Books – Purchases Book, Purchases Returns Book, Sales Book and Sales Returns Book and simple cash book (cash column only).	18
IV	Trial Balance – Meaning - * Objects and its preparation *.	18
V	Final Accounts of Sole Trader with Simple Adjustments – Closing Stock, Outstanding Expenses, Prepaid Expenses, Depreciation and Bad debts.	18

..... Self Study

Text Book(s):
1. R.L.Gupta& M. Radhaswamy - Advanced Accountancy, Sultan Chand & Sons, New Delhi. 2. R.S.N.Pillai, Bagavathi& S. Uma- Fundamentals of Advanced Accounting (Financial Accounting), S. Chand & Company Ltd, New Delhi.
Reference Book(s):
1. T.S. Reddy & A. Murthy - Financial Accounting, Margham Publications, Chennai. 2. S.P. Jain & K.L. Narang - Advanced Accountancy, Kalyani Publications, New Delhi. 3. M. C. Shuckla, T. S. Grewal & S.C. Gupta – Advanced Accounts, S.Chand& co, New Delhi.
Web Resource(s):
1. http://www.ddegjust.ac.in/studymaterial/bba/bba-104.pdf 2. https://icmai.in/upload/Students/Syllabus2012/Study_Material_New/Foundation-Paper2-Revised.pdf 3. https://www.icsi.edu/media/webmodules/publications/FULL%20FAA%20PDF.pdf

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	To acquire the basic principles of accounting	K1
CO2	To develop the accounting practices with relevance to Indian Accounting Standards	K3
CO3	To evaluate subsidiary books of accounts	K3
CO4	To find out the positions of debit aspects and credit aspects	K4
CO5	To prepare the financial statements and to evaluate the performance of a sole proprietary concern	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	3	3	3	0	0	0	0	3	1.8
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	1	2	3	2	2.3
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.14
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Dr. G. Pasupathi

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC3	CORE – III (A)	4	3	10	40	50
Course Title		OFFICE AUTOMATION					

SYLLABUS		
Unit	Contents	Hours
I	Introducing Microsoft Office 2013: Starting an Office 2013 Program-Introducing the Microsoft Office Ribbon- Using the Ribbon-Using the Quick Access Toolbar-Customizing an Office 2013 Program. Selecting and Editing Data: Selecting Data - Editing Text with the Pop-up Toolbar- Deleting Data-Cutting and Pasting (Moving) Data-Copying and Pasting Data-Using Paste Options-Undo and Redo- * Sharing Data with Other Office 2013 Programs* . Modifying Pictures: Adding (and Deleting) Pictures-Manipulating Pictures-Enhancing Pictures.	12
II	Typing Text in Word: Moving the Cursor with the Mouse-Moving the Cursor with the Keyboard-Navigating through a Document-Finding and Replacing Text-Checking Your Spelling-Checking Your Grammar-Viewing a Document. Formatting Text: Changing the Font-Changing the Font Size-Changing the Text Style-Changing Colours-Justifying Text Alignment-Adjusting Line Spacing-Making Lists-Using the Ruler-Using Format Painter. Designing Your Pages: Inserting New Pages-Adding (and Deleting) a Cover Page-Inserting Headers and Footers-Organizing Text in Tables-Sorting a Table- *Making Text Look Artistic* -Dividing Text into Columns.	12
III	The Basics of Spreadsheets Numbers, Labels, and Formulas: Understanding Spreadsheets-Storing Stuff in a Spreadsheet-Formatting Numbers and Labels-Navigating a Spreadsheet-Searching a Spreadsheet-Editing a Spreadsheet-Printing Workbooks. Playing with Formulas: Creating a Formula-Using Functions-Conditional Formatting-Auditing Your Formulas. Charting and Analyzing Data: Understanding the Parts of a Chart-Creating a Chart-Editing a Chart-Using the Chart Tools- *Organizing Lists in Pivot Tables* .	12
IV	Creating a PowerPoint Presentation: Creating a PowerPoint Presentation-Working with Text. Adding Colour and Pictures to a Presentation: Applying a Theme- *Changing the Background* -Adding Graphics to Slide-Adding Movies to a Slide-Adding Sound to a Slide. Showing off a Presentation: Organizing Slides in Sections-Adding Visual Transitions-Adding Hyperlinks-Viewing a Presentation.	12
V	Calendars, Contacts, and Tasks: Setting Appointments-Storing Names and Addresses. Using a Database: Understanding the Basics of a Database-Designing a Database-Editing and Modifying a Database-Typing Data into a Database- *Closing and Saving Database* . Creating a Database Report- Using the Report Wizard- Manipulating the Data in a Report.	12
VI	Current Trends (For CIA only): Mobile Document management, Secure Document management	

..... Self Study

Text Book(s):
1. Office 2013 FOR DUMMIES by Wallace Wang Published by John Wiley & Sons, Inc.
Web Resource(s):
1. https://www.tutorviacomputer.com/microsoft-word-2013-tutorial-free-online/
2. https://support.microsoft.com/en-us/office/word-2013-videos-and-tutorials-14807f76-d2b5-44d6-af11-9c880c44e551
3. https://www.learningcomputer.com/microsoftword-tutorial/word2013/
4. https://www.tutorialspoint.com/advanced_microsoft_word_2013_tutorial/index.asp

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	To give basic idea of MS –OFFICE.	K2
CO2	To give hands on training to the students to get acquainted in working with Ms-Word.	K3
CO3	To give hands on training to the students to analyze data using MS-Excel	K4
CO4	To give hands on training for attractive presentation.	K5
CO5	To give hands on training for storing and accessing data.	K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	2	3	1	0	0	0	1	1.5
CO2	2	3	2	1	2	3	1	2	3	0	1.9
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.04
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. A.M.S. Zunaitha Sulthana

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC3P	CORE – III (B)	2	1	10	40	50
Course Title							
OFFICE AUTOMATION LAB - PRACTICAL							

1. Prepare Circular Letter using font size and styles - bold, underline, upper case, lower case, superscript and subscript.
2. Create Invoice /Bill by using table option.
3. Prepare a newsletter with two columns text, header and footer, inserting a graphic image and page layout.
4. Use mail merge facility for sending a circular letter to many persons.
5. Create a chart for comparing the monthly sales of a company in different branch offices using spread sheet.
6. Prepare student mark list information and use Sorting data, Filtering Data options in spread sheet.
7. Prepare an Inventory bill for a company by using built in functions.
8. Create a new presentation for welcome address using templates and different text formats.
9. Create 5 Slide presentation of your own and do the following (a) Insert Pictures (b) Insert video.
10. Create a slide to display a graph for a given simple data.
11. Using Access create a Employee Database.
12. Using Access, create your own table and do the following (a) Editing table (b) Adding Field (c) Deleting fields.

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Use MS Word with all alignment options for preparing Documents	K1, K2
CO2	Acquire the basic knowledge in creating voice bills using table properties.	K3
CO3	Apply mathematical formulas in spread sheet for various purposes	K4
CO4	Apply suitable creative content for presentation	K4
CO5	Develop database connections using MS Access	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.12
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. A.M.S. Zunaitha Sulthana

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC4	CORE – IV (A)	4	3	10	40	50
Course Title		EDITING TOOLS					

SYLLABUS		
Unit	Contents	Hours
I	Workspace and workflow: Workspace basics -Panels and menus –Tools -Rulers. Image and colorbasics: Image essentials -Image size and resolution-Creating, opening, and importing images-Viewing images-Choosing colors in the color and Swatches panels. Layer: Layer basics-Selecting, grouping, and linking layers-Appling Smart Filters. Image adjustment: *Convert a color image to black and white* .	12
II	Video and animation: Video and animation overview-Creating frame animations-Creating timeline animations- Creating images for video-Saving and exporting video and animations-Editing video and animation layers-Importing video files and image sequences- Painting frames in video layers-Previewing video and animations. Filters and effects: Photographic blur gallery-Add Lighting Effects-Filter effects reference - *saving and exporting* : saving images-Creating web photo galleries.	12
III	Drawing in Flash: About drawing-Drawing modes and graphic objects-About inverse kinematics-About the Timeline- Move the play head - *working with symbols* . Animation: Animation basics-Motion tween animation-Using sounds in Flash-Graphic filters.	12
IV	Drawing and Painting: Strokes, fills, and gradients-Draw simple lines and shapes-3D graphics-Color-Drawing in Flash- Video - *Find and Replace* .	12
V	Essentials of video editing-Adding Transitions-Advanced Editing Techniques-Editing and Mixing Audio-removing background noise with adobe audition- Adding Video Effects- * Creating Titles* .	12
VI	Current Trends (For CIA only): Monochrome, Minimalism, In-Feed Color Blocking	

..... Self Study

Text Book(s):
1. ADOBE® PHOTOSHOP Help and tutorials by Adobe -February 2013 2. ADOBE® FLASH® PROFESSIONAL Help and tutorials--February 2013 3. Adobe premiere Pro, CLASSROOM IN A BOOK by Adobe
Reference Book(s):
Web Resource(s):
1. https://help.adobe.com/archive/en/photoshop/cs6/photoshop_reference.pdf 2. https://help.adobe.com/archive/en/flash/cs6/flash_reference.pdf 3. https://igorkovalov1993.files.wordpress.com/2013/01/adobe-premiere-pro-cs6-classroom-in-a-book.pdf

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	To get basic concepts of Editing.	K1, K2
CO2	To get experience in fixing problems.	K4
CO3	To get basics of Audacity and translating them into practical terms.	K3
CO4	To get experience in image editing	K3
CO5	To get the practical experience in editing video and animation	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.12
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. A.M.S. Zunaitha Sulthana

Semester	Course Code	Course Category	Hours/Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC4P	CORE – IV (B)	2	1	10	40	50
Course Title		EDITING TOOLS LAB - PRACTICAL					

PHOTOSHOP

1. To Design a Photoshop using Various selection tools
2. To demonstrate the layer effect.
3. To convert coloring image to Black and white picture
4. To animate a candle flame using liquefy tool.

FLASH

5. To Create Animation using motion tween.
6. To Bouncing ball using flash
7. To Create Animation using layer.
8. To Create Text morphing using flash

PREMIER PRO

9. In video editing change color and brightness.
10. To Changing the speed/duration of a clip.
11. To removing background noise with adobe audition
12. To applying audio transitions

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	To get basic concepts of Image Editing.	K1, K2
CO2	To get experience in applying different effects to images.	K4
CO3	To get basics of animation with motions.	K3
CO4	To get experience in flash	K3
CO5	To get the practical experience in editing video and animation	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.12
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. A.M.S. Zunaitha Sulthana

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC5P1	CORE – V (A)	3	2	10	40	50
Course Title		C PROGRAMMING LAB - PRACTICAL					

Develop a program in C

1. To calculate area and perimeter of square and rectangle.
2. Using assignment statements.
3. To implement the Nested if-else statement.
4. To demonstrate Logical operators
5. Using While, Do-While & For Loop to print Sum of Series.
6. To perform mathematical operations using Switch
7. To illustrate the use of Functions
8. To swap two numbers using Pointers
9. To make use of arrays.
10. To handle String Functions.
11. To demonstrate Array of Structures.
12. To generate student mark sheet using File.

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Use C language as the base for higher level course in programming	K1, K2
CO2	Acquire the basic constructs of programming languages.	K3
CO3	Apply structured approach in program design	K4
CO4	Apply suitable logic in solving problems	K4
CO5	Develop applications to solve real world problems	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	3	2	3	2	2.5
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.12
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Dr. O.S. Abdul Qadir

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23PDCA1CC5P2	CORE – V (B)	3	2	10	40	50
Course Title		ACCOUNTING PACKAGE LAB - PRACTICAL					

1. Architecture and customization of Tally -- Configuration of Tally.
2. Tally Screens and Menus
3. Creation of new company and groups
4. Ledger Creation
5. Preparation of voucher entries
 - a. Payment voucher
 - b. Receipt voucher
 - c. Sales voucher
 - d. Purchase voucher
 - e. Contra voucher
 - f. Journal voucher
6. Preparation of Trail balance
7. Preparation of Profit and loss statement.
8. Preparation of Balance Sheet
9. Preparation of Bank Reconciliation Statement
10. Creation of inventory reports
 - a. Stock groups
 - b. Stock items
 - c. Unit measurement
 - d. single and multiple Godown

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	To acquire the basic principles of accounting	K1
CO2	To develop the accounting practices with relevance to Indian Accounting Standards	K3
CO3	To evaluate subsidiary books of accounts	K3
CO4	To find out the positions of debit aspects and credit aspects	K4
CO5	To prepare the financial statements and to evaluate the performance of a sole proprietary concern	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	3	3	3	0	0	0	0	3	1.8
CO2	3	3	2	3	2	3	2	3	2	0	2.3
CO3	3	2	3	2	3	2	1	2	3	2	2.3
CO4	2	3	2	2	3	3	3	0	2	2	2.2
CO5	3	2	1	3	1	3	2	1	3	3	2.1
Mean Overall Score											2.14
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Dr. G. Pasupathi

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC6	CORE – VI	6	4	25	75	100
Course Title		VISUAL PROGRAMMING					

SYLLABUS		
Unit	Contents	Hours
I	Visual Basic Definition - Features of Visual Basic – The Visual Basic Philosophy – Developing an Application. Creating an Application: The Tool Box – Project Explorer – *The properties Window* – The Form Window– What does Visual Basic 6 have for you to create applications. IDE, Forms and Controls: The Form.	18
II	Variables in Visual Basic - Writing Code in Visual Basic: The Code Window – The Anatomy of a Procedure – Editor Features – For...Next Statement – Decision Maker. If – Loop – While Loop – * Select Case.....End Select *.	18
III	Working with files: Visual Basic File System Controls – Types of Files – Working with Files – Menus – Building the User Interface – All about Menus. Multiple Document Interface Applications: Features of an MDI Form – Loading MDI Forms and Child Forms – * The ActiveForm Property *.	18
IV	Debugging Tips: Objectives - The Debugging Methods – The Common Dialog Control. Additional Controls in VB 6.0:SSTab Control – Working with SSTab Control – Setting Properties at run time – Adding controls to Tab – The Tab Orientation Property – The ImageList control – TabStrip Control – * Status Bar Control *– TreeView Control.	18
V	Introduction to Databases: Database Access – Working with the Data Control: The Data Control - Coding – Data Access Objects – The Jet Data Base Engine – Functions of the Jet Database Engine – SQL – The DAO Object Model. Crystal and Data Report: Crystal Reports – *Data Reports*	18

..... Self Study

Text Book(s):
1. Programming with Visual Basic 6.0” by Mohamed Azam, published by Vikas Publishing House Private Limited, 2002
Reference Book(s):
1. Gary Cornell, visual basic 6 from the Ground Up, Tata McGraw Hill Edition, 1998.
Web Resource(s):
1. https://www.freetutes.com/learn-vb6/

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Acquire knowledge about Event Driven in GUI	K1
CO2	Use VB as the base for higher level courses	K2
CO3	Knowledge to connect with database	K3
CO4	Knowledge to generate reports in a software	K4
CO5	Able to develop applications.	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	2	2	3	2	3	2	1	1	2	0	1.8
CO3	1	1	2	3	2	1	2	3	2	1	1.8
CO4	1	2	3	2	2	2	3	1	2	0	1.8
CO5	2	3	2	2	2	2	1	1	3	3	2.1
Mean Overall Score											1.8
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. S. Benazir Butto

Semester	Course Code	Course Category	Hours/Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC7	CORE – VII (A)	4	3	10	40	50
Course Title		DATABASE MANAGEMENT SYSTEMS					

SYLLABUS		
Unit	Contents	Hours
I	RDBMS Concepts: Introduction – Database Approach – DBMS – Comparison of File System with DBMS – Data Models – *Entity-Relationship Model* – RDBMS – Keys – Normalization – Client Server Computing – Oracle Architecture.	12
II	Beginning with SQL: Introduction – SQL Fundamentals – Data Types of SQL – Creating and Manipulating Tables: Introduction – Structure of Table – Table Creation Rules – Create Table Statement – Creating Table from an Existing Table – Role of Constraints to achieve – Data Integrity – Types of Constraints – To Display Information about Table – Altering Table – Removing Tables – Renaming Tables – Table available as Data Dictionary – DML Statement – Inserting Records – Updating Records – Deleting Records – * Truncate Statement *.	12
III	Simple Data Retrieval Statement: SQL*PLUS – Select Statement – Changing Column Heading with Column Aliases – Oracle Functions & Group by Clause: Introduction – Single Row Functions – * Aggregate Functions * – Group Data. Joins & Sub-queries: Types of Join – Nested Queries	12
IV	Introduction to PL/SQL: Introduction – SQL vs PL/SQL – Advantages of PL/SQL – Architecture of PL/SQL – Structures of PL/SQL – PL/SQL Elements – Variables and Constants. Control Statement: Introduction – Conditional Control – Iterative Control – Sequential Control. Error Handling: Handling of Errors – Advantages of Exceptions – Exception Types – Cursor Handling: Introduction – Types of Cursor – Implicit Cursor Handling – Explicit Cursor Handling – * Use of variable attributes %row type in Cursor – Cursor Loop *.	12
V	Sub-Programs: Introduction – Advantages – *Difference between Procedure and Function* – Parts of Functions and Procedures – Procedure – Functions – Recursion – Packages: Introduction – Advantages – Dropping Package – Alter Package. Introduction – Types of Trigger – Creation of Triggers – Parts of Triggers – Error Handling in Triggers – Enabling and disabling Triggers.	12
VI	Current Trends (For CIA only): Cloud Based DBMS, Augmented DBMS, Database-as-a- Service	

..... Self Study

Text Book(s):
1. Parteek Bhatia, SanjivDatta, Ranjit Singh, Simplified Approach to Oracle, Third Revised Edition 2008. Kalyani Publications
Reference Book(s):
1. Ivan Bayross, Commercial Application Development Using Oracle, 2nd Revised Edition, BPB Publications, 2013
2. Rajeeb C. Chatterjee, Learning Oracle SQL and PL/SQL: A Simplified Guide, PHI Learning Private \ Limited, 2012
Web Resource(s):
1. https://www.w3schools.com/sql/

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Enhance the knowledge and understanding of Database analysis and design.	K1, K2
CO2	Design ER-models to represent simple database application scenarios	K3
CO3	Improve the database design by normalization.	K3
CO4	Write SQL queries to retrieve information for business decision making from databases with many tables.	K4
CO5	Solve Database problems using SQL and PL/SQL. This will include the use of Functions, Packages, and Triggers.	K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	1	0	2	3	2	0	0	2	1.5
CO2	3	3	2	1	3	3	2	1	2	0	2.0
CO3	3	3	1	3	2	3	3	3	0	1	2.2
CO4	3	2	2	3	1	0	3	0	1	0	1.5
CO5	3	2	3	3	1	3	2	2	3	3	2.5
Mean Overall Score											1.94
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mr. S. Syed Ibrahim

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC7P	CORE – VII (B)	2	1	10	40	50
Course Title		RDBMS LAB - PRACTICAL					

1. SQL: Data Definition Languages

Table Creation - Primary Key, Candidate key, Foreign Key, On Delete Cascade

Table Alteration - Rename table and Column name, Add Column, Drop column,

Modify Column size and Data type

Drop Table

2. SQL: Data Manipulation Languages

Insertion

Update and Update with case statement

Deletion

Retrieval data using comparison operations (<,>, <>, >=, =>)

String

Operations Set

Operations

Tuple

Variables

Aggregate Functions with Grouping and Having Clause

Ordering Tuples

Nested Sub-queries –Set Membership, Set Comparison

Join Operations – Equi Join, Left outer join, Right outer join, Full Outer join

Views

3. PL/SQL

Procedure Reverse the String

Find Factorial number using Recursive Function

Prepare Student Mark Sheet Employee

Pay Roll

4. SQL forms

Pay Roll Preparation

Income Tax Calculation

Student Mark Sheet

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Enhance the knowledge and understanding of Database analysis and design.	K1, K2
CO2	Design ER-models to represent simple database application scenarios	K3
CO3	Improve the database design by normalization.	K3
CO4	Write SQL queries to retrieve information for business decision making from databases with many tables.	K3
CO5	Solve Database problems using SQL and PL/SQL. This will include the use of Functions, Packages, and Triggers.	K4, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	1	0	2	3	2	0	0	2	1.5
CO2	3	3	2	1	3	3	2	1	2	0	2.0
CO3	3	3	1	3	2	3	3	3	0	1	2.2
CO4	3	2	2	3	1	0	3	0	1	0	1.5
CO5	3	2	3	3	1	3	2	2	3	3	2.5
Mean Overall Score											1.94
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mr. S. Syed Ibrahim

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC8	CORE – VIII (A)	4	3	10	40	50

Course Title	SHELL PROGRAMMING
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SYLLABUS		
Unit	Contents	Hours
I	UNIX: An Introduction – Features of UNIX – UNIX System Organisation – *UNIX File System* – UNIX Versions. Linux: An Introduction – Linux Commands: Directory Oriented Commands – File Oriented Commands.	12
II	Linux Commands: Process Oriented Commands – Communication Oriented Commands – General Purpose Commands. Vi Editor: Starting Vi modes – insert, delete and replace commands – *Search Commands* – Redo, Undo Commands.	12
III	Shell Programming: Shell script – Shell variables – escape mechanisms - Shell meta characters – *control statements* – iterative statements.	12
IV	Some sample Shell scripts – System Administration: system administrator – booting and shutting down the system – adding and deleting a user - *Compression and Decompression* – Backup – Remote system Accessing.	12
V	The C Shell : Setting variables – input – loops – MySQL and PHP : MYSQL – working with mysql – operators – data types – creating a table – inserting and selecting values – updating and altering a table – dropping a table – *PHP* – First example – variables.	12

..... Self Study

Text Book(s):
1. Mohamed Ibrahim, Linux – A Practical Approach, By Firewall Media publications, 2005.
Reference Book(s):
1. Richard Petersen, Linux – The Complete Reference, Sixth Edition, Tata McGRAW Hill Publications.
Web Resource(s):
1. https://www.tutorialspoint.com/unix/shell_scripting.htm
2. https://www.javatpoint.com/shell-scripting-tutorial
3. https://www.shellscript.sh/

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Understand basic unix shell commands.	K1, K2
CO2	Recognize and understand commands related to inodeping, mails.	K2
CO3	Apply and develop shell programming using conditions and operators.	K3
CO4	Provide practices to create a file using instructions.	K6
CO5	Apply the script for performing particular tasks.	K3,K4

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	2	0	2	3	1	0	0	2	1.5
CO2	3	2	2	1	2	3	3	2	0	0	1.8
CO3	3	2	1	2	1	3	2	2	1	0	1.7
CO4	3	2	2	1	1	0	3	0	1	0	1.3
CO5	3	3	2	1	0	3	2	1	0	0	1.5
Mean Overall Score											1.56
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Ms. S. Tamil Fathima

Semester	Course Code	Course Category	Hours/Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC8P	CORE – VIII (B)	2	1	10	40	50
Course Title		SHELL PROGRAMMING LAB - PRACTICAL					

1. Working with basic Linux commands.
2. Working with editors and extraction of files using Linux commands.
3. Write a Shell program to read a string using while and continue statements. If the given string has no value in it, then display “Null String” otherwise display the given string.
4. Write a shell script to find the details of a user session.
5. Write a Shell program to read 2 words one after another. Display the first word, go to sleep mode for 30 seconds using ‘sleep’ command. After 30 seconds, display the second word.
6. Write a Shell program for finding out the factorial of a given number using for loop.
7. Write a Shell script to check the user is eligible for vote or not [one must attain 18 years for voting. Ignore month differences].
8. Write a Shell program using 3 arguments to take the pattern as well as input and output file names. If the pattern is found then display “Pattern Found” else display “Error Message”. Also check if right number of arguments is entered.
9. Write a Shell program to delete the files interactively using ‘rm’ command and ‘while’ statement.
10. Write a Shell script to check whether a given string is palindrome or not.
11. Enhance the cp command to copy files. Display the necessary error message if error occurs.
12. Write a Shell program to prepare the electricity bill based on the following conditions: For first 100 units – Rs.0.75/unit
For next 100 units – Rs.1.50/unit
Above 200 units – Rs.300/unit

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Understand basic unix shell commands.	K1, K2
CO2	Recognize and understand commands related to inodeping, mails.	K2
CO3	Apply and develop shell programming using conditions and operators.	K3
CO4	Provide practices to create a file using instructions.	K6
CO5	Apply the script for performing particular tasks.	K3,K4

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	2	2	0	2	3	1	0	0	2	1.5
CO2	3	2	2	1	2	3	3	2	0	0	1.8
CO3	3	2	1	2	1	3	2	2	1	0	1.7
CO4	3	2	2	1	1	0	3	0	1	0	1.3
CO5	3	3	2	1	0	3	2	1	0	0	1.5
Mean Overall Score											1.56
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Ms. S. Tamil Fathima

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC9	CORE – IX	6	4	25	75	100
Course Title		WEB DESIGN					

SYLLABUS		
Unit	Contents	Hours
I	Introduction to the Internet - Computers in Business, Networking, Internet, E-mail, Resource Sharing, *World Wide Web*, Telnet, Bulletin Board Service, Wide Area Information Service.	18
II	Internet Technologies - Modem,* Internet Addressing *, Physical Connections, Telephone Lines - Internet Browsers - Internet Explorer.	18
III	Introduction to HTML - History of HTML, HTML Documents, Anchor Tag, Hyper Links - Head and Body Sections - Header Section - Title, Prologue, Links, * Colorful Web Page *, Comment Lines.	18
IV	Designing the Body Section - Heading Printing, Aligning the Headings, Horizontal Rule, Paragraph, * Tab Settings *, Images and Pictures-low resolution images, Lists, Unordered Lists, Ordered Lists.	18
V	Table Handling – Tables, Tables Creation in HTML – Frameset Definition, Frame Definition, Forms: Action Attribute- Method Attribute-Enctype Attribute-Drop down list: * Check Boxes-Radio Button*s-Text Field- Submit and Reset Buttons.	18
VI	Current Trends (For CIA only): Blockchain Technology, Progressive Web Apps	

..... Self Study

Text Book(s):
1. C. Xavier, World Wide Web Design with HTML, TMH, 19th Reprint, 2008.
Reference Book(s):
1. N.P. Gopalan and J. Akilandeswari, Web Technology A Developer’s Perspective, PHI, Second Printing, July 2008.
Web Resource(s):

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Understand the concepts necessary to create dynamic web applications.	K1, K2
CO2	Evaluate Several Alternatives in the Design of a Web Application.	K5
CO3	Develop A Functional Web Application.	K6
CO4	Comprehend and Propose Web Application Infrastructure	K4
CO5	Apply Code Reuse With Templates, Libraries, And Snippets	K3

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	0	2	3	2	0	0	2	1.7
CO2	3	3	2	1	0	3	3	2	1	0	1.8
CO3	3	3	2	2	1	3	1	2	1	0	1.8
CO4	3	3	3	1	1	3	2	0	1	0	1.7
CO5	3	3	2	1	0	3	2	1	0	0	1.5
Mean Overall Score											1.7
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. R. Senthamil Selvi

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC10P1	CORE – X (A)	3	2	10	40	50
Course Title							
WEB DESIGN LAB - PRACTICAL							

Develop a HTML document

- To basic alignments on headers and format the document using suitable tags
- To display your name as an <h1>heading and displays any of your friends as hot text. When you click your friend's name, it opens another page, which tells about your friends
- For describing a hill station. Assign a suitable background design, background color and text color.
- To illustrate basic text formatting tags.
- To illustrate tag and perform basic picture formatting such as picture middle, top, and bottom of text.
- To display the arts and science department of your college and the courses offered by the department using list.
- To create table with rows and columns and split them using rows span and column span.
- To include basic style elements.
- To make use of frames and framesets which gives the information about a Hospital.
- To create a small paragraph about 10 lines. Try to use Font, Title and Head Tags. Apply different sizes and colors using Tags.
- Application form for admission to under graduate course.
- Using dropdown list.

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Understand the concepts necessary to create dynamic web applications.	K1, K2
CO2	Evaluate Several Alternatives in the Design of a Web Application.	K5
CO3	Develop A Functional Web Application.	K6
CO4	Comprehend and Propose Web Application Infrastructure	K4
CO5	Apply Code Reuse With Templates, Libraries, And Snippets	K3

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	2	0	2	3	2	0	0	2	1.7
CO2	3	3	2	1	0	3	3	2	1	0	1.8
CO3	3	3	2	2	1	3	1	2	1	0	1.8
CO4	3	3	3	1	1	3	2	0	1	0	1.7
CO5	3	3	2	1	0	3	2	1	0	0	1.5
Mean Overall Score											1.7
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. R. Senthamil Selvi

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23PDCA2CC10P2	CORE – X (B)	3	2	10	40	50
Course Title		VISUAL PROGRAMMING LAB - PRACTICAL					

1. Simple exercises using standard controls.
2. Program to scroll a text from left to right and right to left of the client area
3. Program to load a picture in the picture box during runtime.
4. Program to find Biggest of 2 numbers using If..Else statement
5. Program to find sum of individual digits of a given number using while statement
6. Program to check the given string is palindrome or not
7. Program to create MDI Form and Child Form
8. Program to implement CommonDialogControl
9. Program to create status bar and display it in the form
10. Program to populate the table entities using data bound control.
11. Program to prepare a student's mark list
12. Program to prepare an invoice report using crystal report.

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	CO Statement	Cognitive Level (K-Level)
CO1	Acquire knowledge about Event Driven in GUI	K1
CO2	Use VB as the base for higher level courses	K2
CO3	Knowledge to connect with database	K3
CO4	Knowledge to generate reports in a software	K4
CO5	Able to develop applications.	K5, K6

Relationship Matrix:

Course Outcomes (COs)	Programme Outcomes (POs)					Programme Specific Outcomes (PSOs)					Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5	
CO1	3	3	0	0	3	3	0	0	0	3	1.5
CO2	2	2	3	2	3	2	1	1	2	0	1.8
CO3	1	1	2	3	2	1	2	3	2	1	1.8
CO4	1	2	3	2	2	2	3	1	2	0	1.8
CO5	2	3	2	2	2	2	1	1	3	3	2.1
Mean Overall Score											1.8
Correlation											Medium

Mean Overall Score = Sum of Mean Score of COs / Total Number of COs

Mean Overall Score	Correlation
< 1.5	Low
≥ 1.5 and < 2.5	Medium
≥ 2.5	High

Course Coordinator: Mrs. S. Benazir Butto