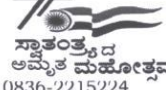




NAAC Accredited  
'A' Grade: 2014

**KARNATAK UNIVERSITY, DHARWAD**  
**ACADEMIC (S&T) SECTION**  
**ಕರ್ನಾಟಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಧಾರವಾಡ**  
**ವಿದ್ಯಾಮಂಡಳ (ಎಸ್&ಟಿ) ವಿಭಾಗ**

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No. KU/Aca(S&T)/JS-30/2022-23/1392

Date: 19 DEC 2022

**ಅಧಿಸೂಚನೆ**

ವಿಷಯ: 2022-23ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಎಲ್ಲ PG Diploma, Advance Diploma, Diploma & Certificate Courseಗಳನ್ನು Credit ರೂಪ ಹಾಗೂ ಸೆಮಿಸ್ಟರ್ ಪದ್ಧತಿಗೆ ಸದರಿ ಎಲ್ಲ ಕೋರ್ಸುಗಳಲ್ಲಿ ಏಕ ರೂಪದ Creditಗಳನ್ನು ಅಳವಡಿಸುವ ಕುರಿತಾದ ಕರಡು ವಿನಿಯಮಾವಳಿ ಹಾಗೂ ಪಠ್ಯಕ್ರಮವನ್ನು ಅಳವಡಿಸಿರುವ ಕುರಿತು.

ಉಲ್ಲೇಖ: 1. ವಿಶೇಷ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ನಿರ್ಣಯ ಸಂ. 09, ದಿನಾಂಕ: 07.12.2022

2. ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಆದೇಶ ದಿನಾಂಕ: 15/12/2022

ಮೇಲ್ಕಾಣಿಸಿದ ವಿಷಯ ಹಾಗೂ ಉಲ್ಲೇಖಗಳನ್ವಯ ಮಾನ್ಯ ಕುಲಪತಿಗಳ ಆದೇಶದಂತೆ, ದಿನಾಂಕ: 07.12.2022 ರಂದು ಜರುಗಿದ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯಲ್ಲಿ ನಿರ್ಣಯಿಸಿದಂತೆ, 2022-23ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿನಿಂದ ಅನ್ವಯವಾಗುವಂತೆ, PG Diploma / Advance Diploma / Diploma / Certificate Courseಗಳನ್ನು Credit ರೂಪ ಹಾಗೂ ಸೆಮಿಸ್ಟರ್ ಪದ್ಧತಿಯಂತೆ ಸದರಿ ಮೇಲಿನ ಎಲ್ಲ ಕೋರ್ಸುಗಳಲ್ಲಿ ಏಕ ರೂಪದ Creditಗಳನ್ನೊಳಗೊಂಡಂತೆ ಕರಡು ವಿನಿಯಮಾವಳಿಗಳಂತೆ ಈಗಾಗಲೇ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಪ್ರಕಟಿಸಲಾಗಿದೆ. ಸದರ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಕ.ವಿ.ವಿ. [www.kud.ac.in](http://www.kud.ac.in) ಅಂತರ್ಜಾಲದಿಂದ ಡೌನ್‌ಲೋಡ್ ಮಾಡಿಕೊಳ್ಳಲು ಸೂಚಿಸುತ್ತಾ, ವಿದ್ಯಾರ್ಥಿಗಳು ಹಾಗೂ ಸಂಬಂಧಿಸಿದ ಎಲ್ಲ ಬೋಧಕರ ಗಮನಕ್ಕೆ ತಂದು ಅದರಂತೆ ಕಾರ್ಯಪ್ರವೃತ್ತರಾಗಲು ಸೂಚಿಸಲಾಗಿದೆ.

ಅಡಕ: ಮೇಲಿನಂತೆ

  
ಕುಲಸಚಿವರು.

ಗೆ,

ಅಧ್ಯಕ್ಷರು / ಸಂಯೋಜಕರು, Dr. B.R.Ambedkar Studies / Basava Adhyana Peetha / KRI / Gandhian Studies / Jainology / Kanaka Studies / Kannada / Hindi / Sanskrit / Women's Studies / Yoga Studies / Psychology / Babu Jagajivan Ram Studies / Commerce / History & Arch. / Computer Science / Criminology & Forensic Sci. / Veman Studies / Management / Law / Foreign Language, BTTM (KACD) ಅಧ್ಯಯನ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ (ಕ.ವಿ.ವಿ. ಅಂತರ್ಜಾಲ ಹಾಗೂ ಮಿಂಚಂಚೆ ಮೂಲಕ ಬಿತ್ತರಿಸಲಾಗುವುದು)

ಪ್ರತಿ:

1. ಕುಲಪತಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
2. ಕುಲಸಚಿವರ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
3. ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ) ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
4. ಅಧೀಕ್ಷಕರು, ಪ್ರಶ್ನೆ ಪತ್ರಿಕೆ / ಗೌಪ್ಯ / ಜಿ.ಎ.ಡಿ. / ವಿದ್ಯಾಂಡಳ (ಪಿ.ಜಿ.ಪಿ.ಎಚ್.ಡಿ) ವಿಭಾಗ, ಸಂಬಂಧಿಸಿದ ಕೋರ್ಸುಗಳ ವಿಭಾಗಗಳು ಪರೀಕ್ಷಾ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.
5. ನಿರ್ದೇಶಕರು, ಕಾಲೇಜು ಅಭಿವೃದ್ಧಿ / ವಿದ್ಯಾರ್ಥಿ ಕಲ್ಯಾಣ ವಿಭಾಗ, ಕ.ವಿ.ವಿ. ಧಾರವಾಡ.

KARNATAK UNIVERSITY, DHARWAD



Regulation and Syllabus  
For

(I and II Semester)

Post Graduate Department of Studies in Computer Science  
Pavate Nagar Dharwad – 580 003

**Syllabus**

For

**PGDCA (P.G. Diploma in Computer Applications)**

**w.e.f. 2022-23 Onwards**

**KARNATAK UNIVERSITY, DHARWAD**

**Regulations governing one-year  
P.G. Diploma In Computer Applications**

**PREAMBLE**

**INTRODUCTION:** The area of Computer Science and its applications is advancing rapidly, especially during the last few years. In view of the present developments in the area and needsof job market, the Board of Studies in Computer Science, decided to revise the present syllabus of PGDCA course.

**OBJECTIVES**

To train students in various aspects of Computer applications

To provide diverse and fulfilling career options in computer applications.

**COURSE OFFERED**

One year P.G. Diploma course in Computer Application (concurrent course)

**COURSE STRUCTURE:**

**1. Title:**

The course shall be called P.G. Diploma in computer Applications (PGDCA)

**2. Duration:**

This course is extended over a period of one academic year with two semesters. Each semester will have 16 weeks duration.

**3. Eligibility:**

A candidate who has passed the Bachelor's degree examination with a minimum of 45% marks in any discipline is eligible for admission to the course. In case of SC/ST students the relaxation for eligibility condition shall be as fixed by the University from time to time.

**4. Medium of Instruction:**

The medium of instruction will be in English only.

**5. Hours of Instruction:**

There shall be four hours per week for every theory & practical papers.

**6. Number of papers:**

Each semester will have a total of 650 marks consisting theory, practical mini project.

**7. 0 Attendance:**

7.1 Each course shall be taken as a unit for the purpose of calculating the attendance.

7.2 Each student shall sign the attendance register maintained by the Department for each course for every hour/unit of teaching. The course teachers shall submit the monthly attendance report to the Chairperson/ Coordinator of the respective Department who shall notify the same on the notice board of the Department during the second week of the subsequent month.

- 7.3 Marks shall be awarded to the student for attendance as specified in the regulations concerning evaluation.
- 7.4 A student shall be considered to have satisfied the required attendance for each course if he/she has attended not less than 75 % of the total number of instructional hours during the semester.
- 7.5 There is no provision for condoning shortage of attendance.
- 7.6 The students who do not satisfy the prescribed requirement of attendance shall not be eligible for the ensuing examination. Such candidates may seek admission afresh to the given semester.

## **8.0 Examination**

- 8.1 There shall be an examination at the end of each semester conducted by the University.
- 8.1.1 There shall be semester-end examination of 2 hours duration for the courses carrying 60 marks in theory and 25 marks in Practical (wherever applicable).
- 8.1.2 Every student shall register for each semester-end examination as per the University Notification by submitting duly completed application form through the proper channel and shall also pay the fees prescribed.
- 8.1.3 The Office of the Registrar (Evaluation) / UUCMS shall allot the Register Number to the candidate at the 1<sup>st</sup> semester-end examination. That will be the Register Number of the candidate for subsequent appearances and semester-end examinations.
- 8.1.4 The Answer scripts shall be in the safe custody of the University for a period of six months from the date of announcement of results.
- 8.1.5 The programme is a fully carry-over system. A candidate reappearing for either the first or second semester examinations shall be permitted to take examinations as and when conducted.
- 8.1.6 Candidates who have failed, remained absent or opted for improvement in any course/ courses shall appear for such course/ courses in the two immediate successive examinations that are conducted. However, in the case of the candidates appearing for improvement of their marks, the marks secured in the previous examination shall be retained, if the same is higher.
- 8.1.7 Candidates who desire to challenge the marks awarded to them in the semester end examinations may do so by submitting an application along with the prescribed fee to the Registrar (Evaluation) within 12 days from the announcement of results.
- 8.2 **First semester**
- 8.2.1 There shall be a Board of Examiners to set, scrutinize and approve the question papers.
- 8.2.2 The BOE shall scrutinize the question papers submitted in two sets by the paper setters and submit the same to the office of the Registrar (Evaluation).
- 8.2.3 The office of the Registrar Evaluation shall dispatch the question papers to the Department/ P. G .Centres/ Colleges who shall conduct the Examinations according to the schedule announced by the University.
- 8.2.4 The Chairperson / Coordinator of the Department/ Administrator of the P. G. Centre/ Principal of the College shall appoint one of their full time course teachers as Post Graduate Programme (PGP) Coordinator who shall conduct the examinations and arrange for evaluation of answer scripts for first semester.
- 8.2.5 Answer scripts shall be valued by the examiners appointed by the University. However, in those circumstances where an examiner for a particular course is not available, then the answer scripts of that course shall be dispatched to the office of the Registrar (Evaluation) who shall arrange for valuation of the same.
- 8.2.6 There shall be a single valuation for first semester. The examiner (Internal or External) shall value the answer scripts and shall indicate the marks awarded to each question on marks list.

8.2.7 The Marks List, a copy of the Examination Attendance Sheet and the sealed bundles of the answer scripts shall be dispatched by the PGP Coordinator to the Registrar (Evaluation)'s Office at the conclusion of the valuation at the respective centres.

8.2.8 The Office of the Registrar Evaluation shall process and announce the results.

### 8.3 **Second Semester:**

8.3.1 There shall be a Board of Examiners to set, scrutinize and approve question papers.

8.3.2 As far as practicable, it will be ensured that 50% of the paper setters and examiners are from other Universities/ Research Institutes.

8.3.3 Each answer script of the semester-end examination (theory and project report) shall be assessed by two examiners (one internal and another external). The marks awarded to that answer script shall be the average of these two evaluations. If the difference in marks between two evaluations exceeds 20% of the maximum marks, such a script shall be assessed by a third examiner. The marks allotted by the third examiner shall be averaged with nearer award of the two evaluations.

Provided that in case the number of answer scripts to be referred to the third examiner in a course exceeds minimum of 5 or 20% of the total number of scripts, at the even semester-end examinations, such answer scripts shall be valued by the Board of Examiners on the date to be notified by the Chairperson of the Board of Examiners and the marks awarded by the Board shall be final.

### 8.4 **Evaluation**

8.4.1 Each Course shall have two evaluation components – Formative (Internal) Assessment (IA) and the Summative (Semester End) Exams.

8.4.2 The IA component in a theory course shall carry 40% and the Semester-end Examination shall carry 60%. Whereas IA component in Practical course shall carry 50% and the Semester-end Examination shall carry 50% Courses having 40 % / 50 % marks as internal assessment shall have 3 marks allotted to attendance.

8.4.3 Marks for attendance shall be awarded to the students as stipulated below :

<b>Attendance (in percentage)</b>	<b>Marks</b>
Above 90	3
Above 80 and up to 90	2
Above 75 and up to 80	1
75	No marks

8.4.4 Formative or Internal Assessment (IA) shall be based on 02 written tests, seminars, assignments / any other instructional activity (10 marks each for theory).

8.4.5 The IA marks list shall be notified on the Department notice board as and when the individual IA components are completed and the consolidated list shall be submitted to the Office of the Registrar (Evaluation) before the commencement of semester-end examination.

8.4.6 The tests shall be written in a separately designated book supplied by the University which shall be open for inspection by the students after evaluation.

8.4.7 There is no provision for seeking improvement of Internal Assessment marks.

8.4.8 The IA records, pertaining to Semester-end Examination, shall be preserved by the department/Centres/Colleges for a period of one year from the date of semester examination. These records may be called by the University or a body constituted by the University as and when deemed necessary.

### 9.0 **Maximum duration for completion of the Programme**

9.1 A candidate admitted to any P.G. Diploma shall complete it within a period, which is double the duration of the programme from the date of admission.

**9.2** Whenever the syllabi are revised, the candidate reappearing shall be allowed for the examinations only according to the new syllabi.

**10.0 Declaration of Results**

**10.1** The minimum marks for a pass in each course shall be 40% of the total marks including both the IA and the semester-end examinations. Further, the candidate shall obtain at least 50% of the marks in the semester-end examination. There is no minimum for the IA marks.

**10.2** Candidates shall secure a minimum of 50% in aggregate in all courses of the programme in each semester to successfully complete the programme.

**10.4** For the purpose of announcing the results, the aggregate of the marks secured by a candidate in two semester examinations shall be taken into account. However, Ranks shall not be awarded in case the candidate has not successfully completed each of the semesters in first attempt or has not completed the programme in the stipulated time or had applied for improvement of results.

**11.0 Percentage and Grading :** Result shall be declared in terms of SGPA and at the end of two semester as CGPA. The calculation of CGPA is as under.

- a) If P is the percentage of marks secured (IA + semester end score) by the candidate in a course which is rounded off to the nearest integer, the grade point (GP) earned by the candidate in that course will be given as below:

Percentage (%)	Grade(GP)	Percentage (%)	Grade(GP)
40	4.0	71-75	7.5
41-45	4.5	76-80	8.0
46-50	5.0	81-85	8.5
51-55	5.5	86-90	9.0
56-60	6.0	91-95	9.5
61-65	6.5	96-100	10.0
66-70	7.0		

Grade point of less than 4 shall be considered as fail in the course, hence, GP=0 and for the absent candidate also GP=0.

- b) A student's level of competence shall be categorized by grade point (GP), Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of the programme.

- c) **Semester Grade Point Average (SGPA):** The SGPA is a ratio of sum of the number of Credit Grade Points scored from all the courses (subject) of given semester to the total credits of such semester in which the candidate studied.

(Credit Grade Points of each course = Credits x GP)

- d) **Cumulative Grade Point Average (CGPA):** It is calculated as below for 2 semester programme.

e)

f) 
$$CGPA = \frac{(Credit_1 \times SGPA_1) + (Credit_2 \times SGPA_2)}{\text{Total credits of programme (sum of credits of 2 semesters)}}$$

But, a result p: Or 
$$CGPA = \frac{\text{Total credit grade points of all the courses(subjects) in the programme}}{\text{Total credits of programme}}$$

CGPA of the programme(Degree)	Class obtained	Grade Letter
9.5 to 10.00	Outstanding	A <sup>++</sup>
7.00 to 9.49	Distinction	A <sup>+</sup>
6.00 to 6.99	First Class	A
5.50 to 5.99	Second class	B <sup>+</sup>
5.00 to 5.49		B
4.00 to 4.99	Pass	C
Less than 4.0	Fail/ Reappear	D

## PGDCA (P.G. Diploma in Computer Applications)

w.e.f. 2022-23 Onwards

Semester	Core Course(Subject / Paper)	Max. Marks		Total Marks	Teaching Hrs/ week	Credits
		IA	Sem. end Exam			
I	Introduction to Office Automation-1 (Theory)	40	60	100	04	04
	C porgramming-2(Theory)	40	60	100	04	04
	Windows Operating System-3 (Theory)	40	60	100	04	04
	Office Automation Lab -4 (Practical)	40	60	100	04	04
	C Programming Lab-5 (Practical)	40	60	100	04	04
	Operating System Lab-6(Practical)	40	60	100	04	04
	Activities / Practical/ Mini project 1	25	25	50	04	02
<b>Total Marks for the First Semester</b>		<b>265</b>	<b>385</b>	<b>650</b>	<b>28</b>	<b>26</b>
II	Page Maker & Adobe Photoshop-7 (Theory)	40	60	100	04	04
	Corel Draw-8(Theory)	40	60	100	04	04
	Tally & SPSS-9 (Theory)	40	60	100	04	04
	Page Maker & Adobe Photoshop Lab-10 (Practical)	40	60	100	04	04
	Corel Draw Lab-11 (Practical)	40	60	100	04	04
	Tally & SPSS-12 (Practical)	40	60	100	04	04
	Core Course(CC)-Practical/ Mini project 2	25	25	50	04	02
<b>Total Marks for the Second Semester</b>		<b>265</b>	<b>385</b>	<b>650</b>	<b>28</b>	<b>26</b>
<b>GRAND TOTAL (SEMESTER I &amp; II)</b>		<b>530</b>	<b>770</b>	<b>1300</b>	<b>56</b>	<b>52</b>

## PGDCA 1.1 INTRODUCTION TO OFFICE AUTOMATION - 1

Total  
Hours: 48

### UNIT-I

Introduction to computers: Anatomy of Computer System, Hardware and Software Components, Memory unit: Types of memory, ROM, RAM, types of RAM & ROM, Introduction to cache and virtual memory. **[10 Hours]**

### UNIT-II

MS-Word: Introduction, Important Features of MS-Word, Creating and Editing a document, Entering Text in the document, Moving Around the document, formatting a document  
Formatting A Document: Format and align text, Line and paragraph spacing, add bulleted and numbered lists, add borders and shading, Changing the Layout of a Document. Using Editing and Proofing Tools: Spell and grammar check, Shortcut Menus, Find and replace text. Working with Tables: Insert a table, convert a table to text, Navigate and select text in a table, resize parts of a table, align text in a table, format a table, Insert and delete columns and rows, Borders and shading, Merge table cells. **[12 Hours]**

### UNIT-III

MS-Excel: The Basics Creating a New Workbook Navigating in Excel Moving the Cell Pointer Using Excel Menus Using Excel Toolbars: Hiding, Displaying, and Moving Toolbars Entering Values in a Worksheet and Selecting a Cell Range, saving a Workbook & Re-opening a saved workbook  
Formatting a Worksheet: Formatting Fonts & Values Adjusting Row Height and Column Width, Changing Cell Alignment, Adding Borders, Applying Colors and Patterns, Using the Format Painter, Using AutoFormat Merging Cells, Rotating Text and using AutoFit Managing your workbooks: Inserting and Deleting Worksheets Renaming and Moving Worksheets, protecting a Workbook Hiding Columns, Rows and Sheets, Entering Date Values and using AutoComplete  
Formulas: Creating a basic Formula Calculating Value Totals with AutoSum Editing & Copying Formulas Fixing Errors in Your Formulas  
Creating & Working with Charts: Creating a Chart Moving and Resizing a Chart Formatting and Editing Objects in a Chart, working with Pie Charts Adding Titles, Gridlines, and a Data Table  
Formatting a Data Series and Chart Axis Annotating a Chart Working with 3-D Charts. **[12 Hours]**

### UNIT-IV

PowerPoint: Understanding the PowerPoint Program Screen. Presentation: Creating a New Presentation, Inserting and Deleting a Slide and Selecting a Layout Opening a Presentation, Navigating a Presentation Using Undo, Redo and Repeat Saving a Presentation.

**Inserting and Editing Text:** Inserting Text Editing Text, Cutting, Copying, and Pasting Text, Moving and Copying Text with the Mouse, Checking Your Spelling, Finding and Replacing Text Inserting Symbols and Special Characters **Formatting Text:** Changing



Font Type, Changing Font Size, Changing Font Color, Changing Font Style, Using the Font Dialog Box, Using the Format Painter Using WordArt. Formatting a Presentation: Using Document Themes, Changing the Background of a Slide Rearranging Slides Adding Headers and Footers Using the Slide Master Working with Bulleted and Numbered Lists Changing Paragraph Alignment and Line Spacing Working with Tabs and Indents. **Working with Objects:** Inserting Clip Art Inserting Pictures and Graphics Files Formatting Pictures and Graphics Inserting Shapes Formatting Shapes Resize, Applying Special Effects to Objects Grouping Objects. **Working with Tables:** Creating a Table, Adjusting Column Width and Row Height, Inserting and Deleting Rows and Columns, Merging and Splitting Cells, Working with Borders and Shading Applying a Table Style.

**[14 Hours]**

***REFERENCES:***

1. Programming in C, P.B. Kotur.
2. Office Automation Concepts and Tools by Tsichritzis, D. (Ed.)
3. Microsoft Office 2016 by Joan Lambert.

## PGDCA 1.2 C PROGRAMMING-2

Total Hours: 48

### Unit I

Introduction to Programming Paradigms: Evolution of programming languages, Structured programming, Procedural programming, object oriented programming, Functional programming and Logic programming, compilation process, object code, source code, executable code, fundamentals of algorithms, flow charts.

[10Hours]

### UNIT-II

Fundamentals: C character set Identifiers & Keywords, data types, constants, variables and arrays, declarations, expressions, statements, symbolic constants

Data types: Properties of type and objects, data objects, variables and constants, data types, specification and implementations of elementary data types, declaration, type checking and type conversion, assignment and initialization, structured data types-vectors and arrays, records, lists, character strings, files and input-output.

[12 Hours]

### UNIT-III

Operators and Expressions: Arithmetic operators, unary operators, relational and logical operators, assignment operators, conditional operators, Library functions. Control Statements: Branching, Looping, Nested control structures, switch break, continue statements, comma operator, go to statement.

Functions: Defining a function, accessing a function, function prototypes, passing arguments to a function, recursion.

[12 hours]

### UNIT-IV

Arrays: Defining and processing, one-dimensional Array, Multidimensional Array declaration and their applications, Passing arrays to a function. String: String variables, declaring & initializing string variables, reading & writing strings, string Functions - concatenation, comparison, copy, length implementing the above functions without using built-in string functions, arithmetic operations on characters, programming examples. [14Hours]

### REFERENCES:

1. Programming Languages, Design and Implementation, Pratt, T.W., PHI
2. Programming with C, Gottfried, Schaum's Series, TMH Publications.
3. Programming in ANSI C, E. Balaguruswamy, TMH Publications.
4. Computer Programming C.V. Rajmaman, PHI
5. Let us C - Yashwant Kanetkar, BPB Publications
6. Programming Languages, Concepts and Constructs, Ravi Sethi, Addison Wiley.

## PGDCA 1.3 WINDOWS OPERATING SYSTEM-3

**Total Hours: 48**

### UNIT-I

**Windows Overview:** History, understanding the OS architecture, Graphics interface, Benefits, Screen attributes: icons and bars, Mouse vs. keyboard input, Features and accessories of the Windows program, Objects and their properties. **[10Hours]**

### UNIT-II

**Installing Windows:** Exploring OS Editions, Planning Clean Installs vs. Upgrades, Understanding Installation Types, Using Virtualized Installations Program management: Creating, saving and editing documents, Concurrent execution of programs, Sharing data between programs

Folder and file management: Working with files, Naming files, Copying and moving files, Deleting files, Managing folders a. Creating, Viewing, Expanding and collapsing.

**[12 Hours]**

### UNIT-III

**Managing the Desktop:** Understanding Desktop Features, Working with Gadgets, Changing Display Settings, Creating Shortcuts Control panel: Customizing screens, Screen colors, Pattern, Spacing icons, selecting time/date, Customizing printing, changing the print queue, configuring the printer(s), Adding printers. Working with fonts: changing, removing, adding, Customizing mouse and keyboard use, System properties and the device manager. Management tools: DOS sessions, Explorer, Memory configuration, Safe mode Device Management: Understanding Device Drivers, Exploring Plug-and-Play Operations, Connecting and Managing Devices, Using Disk Defragmenter, Performing a Disk Cleanup, Scheduling Tasks. Managing Applications: Planning for Local and Network Applications, Install and uninstall applications, Configuring and Removing Applications, Using Group Policy for Application Control, Understanding Application Virtualization, The Difference between Services and StandardApplications. **[14 Hours]**

### UNIT-IV

**Controlling Malware:** Understanding Malware Types, Planning for Malware Protection, Understanding Microsoft Protection Methods Backup and Recovery: Planning for Backups, Testing Recovery Processes, Working with System Restore, Using Recovery Boot Options. Windows Update: Understanding Hotfixes and Service Packs, Planning for Windows Update and Microsoft Update. **[12 Hours]**

**REFERENCES:**

1. Operating Systems: Internals and Design Principles by William Stallings, Fifth Edition Prentice Hall.
2. Microsoft Windows Operating System Essentials by Tom Carpenter Sybex Publishers.
3. An Introduction to Windows Operating System by Einar Krogh
4. Microsoft Windows Security Essentials 1st Edition by Darril Gibson

**Mini Project 1:** Student has to complete the mini project1 based on Lab4/Lab5/Lab6 with project report

## **PGDCA 2.1 PAGE MAKER AND ADOBE PHOTOSHOP -7**

Total Hours: 48

### **UNIT I**

Introduction: Introduction to Page Maker Page Maker Icon and help, Tool Box, Styles, Menus etc., Different screen Views, Importing text/Pictures, Auto Flow, Columns, formatting text.

**[12 Hours]**

### **UNIT-II**

Master Pages & customization: Master Pages and Stories, Story Editor, Menu Commands and short-cut commands, Spell check, Find & Replace, Import Export etc., Fonts, Points Sizes, Spacing etc., Installing Printers, Scaling (Percentages), Printer setup Use of D.T.P. in Advertisements, Books & Magazines, News Paper, Table Editor.

**[12 Hours]**

### **UNIT-III**

Introduction: Introduction to Adobe Photoshop & Documents, Various Graphic Files and Extensions, Vector Image and Raster Images, Various Colour Modes and Models. Layers & Filters: Introduction to Screen and Work Area, Photoshop Tools & Palettes , Layers Palette ,Working with Layers , New Layer via Cut , New Layer via Copy ,Working with Images, The Filter Menu, Filter Gallery , Extract Filter, Noise Filters, Sketch Filters.

**[14 Hours]**

### **UNIT -IV**

Printing and Customization: Import, Export, Automate, Printing, Customize Workspace, Creating an Action.

**[10 Hours]**

### **REFERENCES:**

1. PageMaker(R) 7: The Complete Reference By Carolyn Connally
2. Adobe PageMaker By Barnabas Crist Bal
3. Desktop Publishing Using PageMaker 6.0 Windows By Julia C. Bradley
4. Photoshop 7: The Complete Reference By Laurie Ulrich-Fuller
5. The Adobe Photoshop Layer By Richard Lynch
6. Introduction To Adobe Photoshop By Abigail J Morley

## PGDCA 2.2 Corel DRAW

Total Hours: 48

### Unit I

Introduction to CorelDRAW: Use and importance in Designing, Various Graphic Files and File Extensions ,Vector Image and Raster Images , Introduction to Screen and Work Area.

**[10 Hours]**

### UNIT-II

Introduction to Tools of CorelDRAW: Managing Palettes ,Working with Images, Patterns and Textures ,Working with Shapes, Colours and Fills ,Image Rasterisation and Editing, Transformation Menu. CorelDRAW Files: Coreldraw Files and supporting documents, Import and Export of Files and File formats Page Setup and Designing, Using Styles and Templates, Working with Text, Formatting Text, Text Attributes.

**[14 Hours]**

### UNIT-III

Page Layout and Layers: Designing Different Page Layouts, Column Layout, Special Effect to Objects and Texts, Contour Tool ,Layout for News Paper and Magazines, Working with Layers Hiding/Showing Layers - Deleting Layers, Masking Layers.

**[12 Hours]**

### UNIT-V

Printing and Customization: Preparation of Visiting Cards & Invitation Cards, Shaping Dockers & Logo Design Introduction Brochure & Books, Introduction to Magazine Designing, Web Photo GalleryPrinting.

**[12 Hours]**

### REFERENCES

1. CorelDraw x5 Unleashed, Foster D. Coburn III
2. CorelDraw The Official Guide By Gary David Bouton
3. CorelDRAW Jesse Russell Ronald Cohn.
4. Corel Draw Graphics Suite X4 Training Guide - Corel Draw Version by Mc Sharma

## PGDCA 2.3 TALLY AND SPSS -9

**Total Hours: 48**

### **Unit-I**

Manual Accounting: Accounting, Need for accounting, Types of accounts, Rules of debit & credit, Accounting principles or standards, Accounting concepts, Accounting conventions, Accounting system, Recording transactions in journal, Ledger (Classifying), Trial balance, Final Accounts, Trading & P/L statement, Balance sheet, Adjustment Entries, Summary. **[10 hours]**

### **UNIT-II**

Computerized Accounting: Installing Tally – Requirements & procedure for installing tally, Education mode, Changing default settings through tally. Opening screen of tally, Creating Company, shutting a company, Altering/Modifying existing Company, Buttons on the button Panel Accounting Information: Menu related to accounts, Groups, Managing Groups, Creating new group & sub group, Displaying, altering & deleting a group, Creating, Displaying & altering multiple groups. Ledgers: Displaying, altering & deleting single and Multiple Ledgers. Cost categories & Cost centers: Creating, Displaying, Altering & Deleting a cost category and cost centers, Vouchers in Tally, Inventory information, stock categories, stock item, Multiple Stocks, Multiple Godowns, reports and internet capabilities. **[12 hour]**

### **UNIT-III**

Introduction to PASW: Menus, Tool Bar, Dialogue Box, Designate Window, Basic steps for performing any Statistical Procedure Data Management: Creating a Data File, Defining Variables, Entering & Saving Data, Opening an existing Data File, Inserting Variables, Inserting Cases, Identifying Duplicate Cases, Identifying Unusual Cases, Sorting Cases, Merging a File: Add Cases, For Adding Variables, Data Aggregation, Splitting File, Selecting Cases, Listing Cases. **[12 hours]**

### **UNIT-IV**

Data Transformation: Computing a New Variable, Recoding Variables, Types of measurement Scales, Descriptive Statistics, Crosstabs. Describing Data Graphically: Line Chart, Pie Chart, Bar Chart, Histogram and the Standard Normal Curve, Box Plot, Scatter Diagram, P-P Plot, Q-Q Plot, Chart Builder, Formatting Charts. One Sample t-Test: Hypothesis testing, Independent Sample t-Test, Sample t-Test, Procedure for Testing for Differences in Means between Groups, Interpretation of Null Results. Nonparametric statistics: Runs Test, Chi-Square Test, Mann-Whitney U Test, Wilcoxon Signed Rank Test, Kruskal-wallis Test. **[14 Hours]**

### **REFERENCES**

1. Tally ERP 9 by Asok K. Nadhani , BPB Publishers.
2. Computerized Accounting Using Tally.ERP 9 by Tally Education Private Limited.
3. SPSS in Simple Steps by Kiran Pandya Smruti Bulsari Sanjay Sinha, Dreamtech press (2011).
4. SPSS: A User-Friendly Approach by Jeffery E. Aspelmeier, Thomas W. Pierce ,Worth Publishers (2009).
5. Statistical Methods for Practice and research: A Guide to Data Analysis using SPSS 0002 edition 2009.
6. Visual Approach to SPSS for windows: A Guide to SPSS 17.0 by Leonard D.Stern, Pearson 2009.

**Mini Project 2:** Student has to complete the mini project1 based on Lab10/Lab11/Lab12 with project report.