PROGRAMME GUIDE

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
(PGDCA-PROFESSIONAL)

*Scheme of Examination (CBCS/ELECTIVE)
*Detailed Structure of Syllabus

DR. C.V.RAMAN UNIVERSITY
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POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
(PGDCA - PROFESSIONAL)
Duration: 12 Months (1 Year)
Eligibility: Graduation

COURSE STRUCTURE OF PGDCA (PROFESSIONAL) SEMESTER I st												
Subject Details			Main Examinations				Sessionals ***		Credit Distribution			Allotted Credits
			Major		Minor		Max Marks	Min Marks	L	T	P	Subject wise Distribution
Subject Code	Subject Name	Total Marks	Max Marks	Min Marks	Max Marks	Min Marks						
Theory Group												
4TPDC101	Fundamental of computer	100	50	17	20	07	30	12	3	2	-	5
4TPDC102	PC Packages	100	50	17	20	07	30	12	3	2	-	5
4TPDC103	DBMS With MS Access	100	50	17	20	07	30	12	3	2	-	5
4TPDC104	Computer Network & Internet	100	50	17	20	07	30	12	3	2	-	5
4TPDC105	Financial accounting and management control	100	50	17	20	07	30	12	3	2	-	5
Practical Group			Term End Practical Exam				Lab Performance				.	
4TPDC102	PC Packages	50	25		08		25	08	-	-	1	1
4TPDC103	DBMS With MS Access	50	25		08		25	08	-	-	1	1
Grand Total		600										27

Minimum Passing Marks are equivalent toGradeD
Major- Term End Theory Exam/ Practical Exam
Minor- Pre University Test
Sessional weightage – Attendance 50%, Three Class Tests/Assignments 50%

L- Lectures T- Tutorials P- Practical

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POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA-PROFESSIONAL)

Duration: 12 Months (1 Year)

Eligibility: Graduation

COURSE STRUCTURE OF PGDCA(PROFESSIONAL) II SEMESTER												
Subject Details			Main Examinations				Sessional***		Credit Distribution			Allotted Credits
Subject Code	Subject Name	Total Marks	Major		Minor		Max Marks	Min Marks	L	T	P	Subject wise Distribution
			Max Marks	Min Marks	Max Marks	Min Marks						
Theory Group												
4TPDC201	Operating System	100	50	17	20	07	30	12	3	2	-	5
4TPDC202	Introduction to Page Maker	100	50	17	20	07	30	12	3	2	-	5
4TPDC203	Introduction to Corel Draw and Adobe Photoshop	100	50	17	20	07	30	12	3	2	-	5
Elective-I												
4TPDC204	Computer accounting (Tally,Busy ,Saral)	100	50	17	20	07	30	12	3	2	-	5
4TPDC205	Introduction To Internet & Web Technology											
Practical Group			Term End Practical Exam				Lab Performance					
4TPDC201	Operating System	50	25		08		25	08	-	-	1	1
4TPDC202	Introduction to Page Maker	50	25		08		25	08	-	-	1	1
4TPDC203	Introduction to Corel Draw and Adobe Photoshop	50	25		08		25	08	-	-	1	1
4TPDC206	Project Report	100	50		17		50	17	-	-	2	2
Elective-I												
4TPDC204	Computer accounting (Tally,Busy ,Saral)	50	25		8		25	8	-	-	1	1
4TPDC205	Introduction To Internet & Web Technology											
Grand Total		700										26

Minimum Passing Marks are equivalent toGradeD   L- Lectures T- Tutorials

P- Practical

Major- Term End Theory Exam/ Practical Exam

Minor- Pre University Test

Sessional weightage – Attendance 50%, Three Class Tests/Assignments 50%

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SEMESTER- 1st
Course: PGDCA(PROFESSIONAL)
SUBJECT: FUNDAMENTALS OF COMPUTERS

Subject Code: 4TPDC101
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE: Student will be able

1. Making the students understand and learn the basics of computer how it computes, to make familiar with the part and function of computer, its types , how to use computer, its characteristics, its usage, limitations and benefits etc.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	**Introduction to computer**: Definition of computer, types of computer Characteristics of computer, evolution of computer, computer generation, advantage of computer, limitation of computer, uses of computer.	ICT based class room teaching, Group Discussion, Case Analysis, Individual Presentations
Unit – II	**Basic Computer Organization and Number System**: Main computer component, Input unit, processing unit (CPU), output unit. **Number System**: Non Positional number system, Positional Number System, Binary number system octal Number system, Hexadecimal number system, converting from one number system to another Computer Arithmetic: Binary arithmetic, addition, subtraction, multiplication, division	ICT based class room teaching, Case Analysis, Individual Presentation, Visit to Venture Capitalists
Unit – III	**Processor and Memory**: Central processing unit, control unit, arithmetic logic unit, instruction set, registers, processor speed, types of processor, **Main memory**: Storage evaluation criteria, main memory organization, main memory capacity, RAM ROM, PROM, EPROM, cache memory. Secondary memory organization: Sequential and direct access devices, magnetic tape, Magnetic disk, optical disk, memory storage devices, mass storage devices	ICT based class room teaching, Case Analysis, Group Presentation
Unit – IV	**Computer Software and programming language**: What is software, relationship between hardware and software? Types of Software, Software development steps, firmware and middleware. **Algorithm, flowchart, pseuodocodes.** **Introduction to computer language**: Machine language Advantage and limitation of computer language, Assembly language Assembler, advantage of assembly language over machine language. High level language compiler , linker, interpreter, advantage and limitation of high level language, some high level language,4GLS,Object oriented language.	ICT based class room teaching, Case Analysis, Individual Presentation
Unit - V	**Operating system and security** What is OS, main function of OS, Types of OS:-Multiprogramming, multitasking, real time, Time sharing .Some popular OS-UNIX, MS-DOS, MS-Window. **Security:**-what is security, major area of security, security tools and software, virus, worm, detection of boot sector virus.	ICT based class room teaching, Case Analysis, Group Presentation

COURSE OUTCOMES:-

- An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline.
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- An ability to analyze the local and global impact of computing on individuals, organizations, and society.
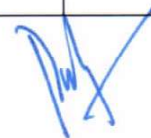
Text Books:

- Introduction to Computers and Information Technology Anurag Seetha (Ram Prasad & Sons, Bhopal.)
- Fundamentals of Information technology, Alexis Leon & Mathews Leon (Vikas Publishing House, NewDelhi.)
- Computer System Architectur MORRIS MANO (PHI Publication)
- Computer fundamental , V .Rajaraman; (PHI Publication)
- Basics of Computer & Information Technolog, Naik Nitin K. , (Kamal Prakashan)

Reference Books:

1. Anurag Seetha, "Introduction to Computers and Information Technology", Ram Prasad & Sons, Bhopal.
2. Galgotia Publications, "Computers Today ", Galgotia Publications.
3. Alexis Leon & Mathews Leon, "Fundamentals of Information technology ", Vikas Publishing House, NewDelhi.
4. Rajeev Mathur, " DOS Quick reference", Galgotia Publications
5. MORRIS MANO, "Computer System Architecture" PHI Publication
6. Computer fundamental: by V .Rajaraman; PHI

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Business Consultant and Advisor Venture Capitalist	Team Working ,Decision Making Skills Persuading, influencing and negotiable skills Leadership skills, Able to improve decision making and problem solving skills	No Poverty, Zero Hunger, Quality Education, Decent Work and Economic Growth, Industry Innovation and Infrastructure achieved	Small Business owner

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SEMESTER- 1ˢᵗ
Course: PGDCA (PROFESSIONAL)
SUBJECT: PC Package

Subject Code: 4TPDC102
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. To understand the basic knowledge of MS Windows.
2. To understand the Office Packages.
3. To understand the MS Excel.
4. To understand the MS PowerPoint.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	**WINDOWS 95 AND 98 :** Introduction, why window 95 & 98, Getting started , Opening a Document, Finding file & folder, Managing file & folder, Working with Document ,configuring Printer , H/W & S/W Installing , Features of Windows , Benefits of Windows , Difference between Windows 95 & 98 & 2000.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	**WORD :** H/W & S/W Requirement for word, starting word, Composing Document, Editing a Document, Creating a New Document , Opening a Document , Closing Document , Selecting & Deleting Text ,Finding & Replace Text ,Hyper Links with word ,spelling & Grammar Tools ,AutoCorrect Tools ,Fonts ,Alignment ,Header & Footers , Mail merge, Columns and tables, Advantages of word , Menus , Title Bar ,Task Bar , Advantage.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Seminar on MS-Word
Unit – III	**EXCEL:** Introduction , The Microsoft Office Spreadsheet , H/W & S/W Requirement for Excel , Starting Excel ,Workbook , Working with Workbooks , Editing Entries , Coping and Moving Entries ,Clearing Cells ,Inserting and Deleting Columns , Changing Column Width , Formulas and Functions , Creating Graphics , Types of Graph , Linking Workbooks , Hyperlinks , PivotTable Report , Advantage.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – IV	**ACCESS:** Introduction, H/W & S/W Requirement for Access, Components of the Access Window /Table/ and Form, Macros, Creating a Table with the Datasheet View, Finding Data, Creating a Report Using Auto Report.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit - V	**POWERPOINT:** Introduction, Starting PowerPoint, Overview of PowerPoint Windows, Creating a Presentation, Adding a slide to a Presentation, The Spelling Tools, Applying a Presentation Design, Viewing a Presentation, Editing Slides, Adding a Table Slide to a Presentation, Using ClipArt Gallery, Editing a WordArt Object, Types of Chart.	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES: –

- Demonstrate the basic mechanics of creating Word documents ,presentation and excel calculation for office use.
- Demonstrate introductory formatting techniques and presentation styles.
- Demonstrate working knowledge of producing a mail merge.
- Demonstrate the basic mechanics and navigation of an Excel spreadsheet.

Text Books:

- MS-Office 2010 Mr. Kalpesh Patel (Computer World (2014))
- PC Software MS Office Naik Nitin K (Kamal Prakashan)
- MS office XP for Everyone, Saxena Sanjay, New Delhi Vikas Publication
- MS office 2000 Resource Kit , Ericson,Gary.. 1st Edition, N.Delhi prentice Hall Pub

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Reference Books:

- Introducing Windows 10 for IT Professionals Ed Bott (Microsoft Press)
- GO! with Microsoft Windows 10 Introductory Gaskin & Vargas (Publisher: Pearson)
- Microsoft Office 2010 a Complete Guide Blokdyk Gerardus (5starcooks
- Windows 7 Complete Reference. BPB Publications
- MS Office 7 complete BPB publication
- MS Windows 7 Home edition complete, BPB Publications
- Microsoft Word, Excel, and PowerPoint: Just for Beginners by Dorothy House

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Computer Operator, Office Assistant, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization,Consultant in Software firms,Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Learn basic's of features of MS-offices packages and improve their skill in document preparation and presentation	No Poverty, Quality Education, Industry Innovation and Infrastructure.	Can start own Computer Assistance services.

SEMESTER- 1st
Course: : PGDCA(PROFESSIONAL)
SUBJECT: DBMS WITH MS ACCESS

Subject Code: : 4TPDC103
Theory Max. Marks: 50
Theory Min. Marks17

COURSE OBJECTIVE:

Student will be able
1. To understand the concept of Data Base Management.
2. To understand the knowledge of Data base design.
3. To develop the skills in MS Acess programming.
4. To understand the concept of Multi data files.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Introduction to Database, What is Database, why use a relational database, overview of database design, Data normalization (Deteremining tables, Determining fields, Determining relationships),Integrity rules (primary key/foreign key, one-to-many, many-to-many, one-to-one) Integrity rules many-to-many, one-to-one),Introduction to MS-access (objects, navigation)	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	Tables in database, create a table in MS-access- Data types, field properties, fields: names, types , properties-default values, format, caption validation rules, data entry add records, delete records and edit text sort, find/replace, filter/select, rearrange and freeze columns ,Edit a tables-copy, delete, import, modify table structure, find, replace	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – III	working with query, setting up relationship-define relationships, add a relationships, set a rule for referential integrity, change the join type, delete a relationships, save relationships, query and filter-difference between query and filter, filter using multiple fileds AND, OR and advance filter queries, create query with one table, find record with select query, find duplicate record with query, find unmatched record with query, run query, save and change query	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – IV	working with forms, introduction to basic form types, Basic forms: tabular, columner, datasheet/main subforms, add headers and footers, add fileds to forms, add text to forms, use label option and buttons, checkbox, combobox list box, form wizards, create templates	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit - V	working with reports, Introduction to reports, types of reports: single column, tabular, Reports groups/total, single table reports, multi table reports, preview report, print report, createing reports and labels, wizards	Usage of ICT :-Power Points, PDF, Video lectures, Black board,

COURSE OUTCOME:-

After study this student will be able to know about the core database administration tasks and tools. Restore databases from backups, Import and export data. Monitor SQL Server.

Remark: Programming Methodology & Programming in FoxPro changes to DBMS With MS Access,because fox pro is out dated language.

Practicals:

1. Write a query to implement Different types of DDL statements in SQL.
2. Write a query to implement Different types of DML statements in SQL.
3. Write a query to implement Different types of DQL statements in SQL.
4. Write a query to implement Different types of DCL statements in SQL.

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5. Write a query to explore 'select' clause using where, order by, between, like, group-by, having etc.
6. Write a query to implement the concept of Joins in SQL.
7. Write a query to implement the concept of Indexes and views.
8. Write a query to implement the restrictions on the table.
9. Write a query to implement the concept of SubQuestionries.
10. Write a query to implement the structure of the table.

Text Books:

• Database Management System (H), Laad Ameet, (Kamal Prakashan)
• Introduction to Database Management Systems , Kahate Atul (Pearson)
• An introduction to database system, Bipin C.Desai (New Delhi Galgotia)

Reference Books:

• Database Management System Leon & Leon (Vikas Publications)
• Database System Concepts Henry F.Korth & Abraham Silberschatz. (New york. MCGraw)
• An Introduction To Database System C.J.Date (New Delhi Pearson)

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Data administrator, database developer, database trainer, oracle engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization,Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Query processing, Database handling, Organizing and Planning Database, Handling data and query processing.	No poverty, Quality Education, Decent Work and Economic Growth, industry innovation and infrastructure	Can start own Data handling company.

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SEMESTER- 1st
Course: PGDCA (PROFESSIONAL)
SUBJECT: COMPUTER NETWORK & INTERNET

Subject Code: 4TPDC104
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. To understand the fundamental concepts of computer networking.
2. To understand the basic taxonomy and terminology of the computer networking area.
3. To understand the advanced networking concepts, preparing the student for entry Advanced courses in computer networking.
4. To understand the various transition method.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	INTRODUCTION TO COMPUTER NETWORK, Network, Computer Networks, Need of Network , Uses of Computer Network, Applications of networks, Network Criteria, Network Hardware and Software, network types : client, server & peers, Classification of Computer Network, Server, ATM (Asynchronous Transfer Mode), Modemthe theoretical network model- OSI, OSI Model, open system interconnection model (OSI), Layered Architecture of the OSI Reference Model, Functions of the ISO/OSI Layers, Summary of OSI Layer functions.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	TRANSMISSION TECHNOLOGY, transmission technology, Data can be analog or digital, Analog and Digital Transmission, asynchronous & synchronous transmission, Types of Communication Modes, BaseBand and Broadband Transmission, Comparison of Baseband and Broadband Signaling, network topology, Network Topology, Types of Network, Local Area Network (LAN), Metropolitan Area Networks (MAN), Wide Area Networks (WAN), Satellite Networks, Wireless LAN	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Computer Networks, Group discussions on Internet Pros and Cons. Individual presentations on Network Devices
Unit – III	TRANSMISSION MEDIA-Transmission Media, Classification of Transmission Media, Comparison of Guided and Unguided Media, Twisted Pair (TP) Cable, Coaxial Cable, Fiber Optic Cable (FOC), Unguided Media, Radio Frequency Characteristics, Microwave Transmission, Applications of Infrared Transmission, Switching Methods, Packet switching, Circuit Switching, Message Switchingdata link layer, Data Link Layer Design issues, Sliding Window Protocols	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – IV	NETWORK ADAPTERS-Multiple Access Protocol, ALOHA, Carrier Sense Multiple Access (CSMA), CSMA/CD [Carrier Sense Multiple Access/Collision Detection], Collision Free Protocols, Limited Contention Protocolnetwork layer, Functions of Network Layer, Routing Algorithms, Congestion Control Algorithm application layer, Domain Name System, Simple Mail Transfer Protocol (SMTP), Hyper Text Transfer Protocol (HTTP), File Transfer Protocol	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – V	CRYPTOGRAPHY, Encryption & Decryption - Cryptography, Terminology, Classification of Cryptography :,Substitution Ciphers :, Security of algorithms :, Steganography :, Steganography vs Cryptography :, public key encryption , Comparison of Symmetric and Asymmetric Key Cryptography , Public Key Cryptanalysis, Digital Signature , Requirements of Digital Signature, Direct Digital Signature, Arbitrated Digital Signature, Authentication Protocols, Symmetric Encryption Approach, Public-Key	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Quiz competition on aptitude question on C++., Project making competition using HTML

Encryption Approach, Digital Signature Standard, RSA and Digital Signature, DSS Approach, The Digital Signature Algorithm.	

COURSE OUTCOMES:-

After study this student will be able to know about
1. Independently understand basic computer network technology.
2. Understand and explain Data Communications System and its components.
3. Identify the different types of network topologies and protocols.
4. Enumerate the layers of the OSI model and TCP/IP. Explain the function(s) of each layer.

Text Books:-

• Networking Essentials: Study Guide MCSE, James Chellis Charles Perkins, Matthew Strebe SecondEdition (BPB Publications)
• Local Area Networks, S.K.Basandra & S. Jaiswal, Galgotia Publications)

Reference Books:

• Computer Network, Andrew & Tanenbaum, (New Delhi Pearson)
• Data and Computer Communication, William Stallings,(New Delhi Pearson)
• Data Communication, Prakash C Gupta, (New Delhi PHI)

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Network administrator, network service provider, network engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Computer networking, maintenance of network, implementation of Network, Organizing and Planning Networks	No poverty, Quality Education, Decent Work and Economic Growth	Can start own Computer Network assistance

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SEMESTER- 1st
Course: : PGDCA(PROFESSIONAL)
SUBJECT: FINANCIAL ACCOUNTING AND MANAGEMENT CONTROL

Subject Code: 4TPDC105
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. The objectives of the subject is to give exposure to the students, about fundamental accounting principles, techniques and their application in the business decision making process.
2. The objective is to provide education about Tally software that is used for financial accounting.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Meaning and objects of accounting, Accounting Cycle, Accounting concepts and conventions, accounting equations, rules of journalizing, ledger posting.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	Cash book, preparation of trial balance, trading and profit and loss account and balance sheet with adjustments relating to closing stock, outstanding expenses, prepaid expenses, Accrued income depreciation, Bad debts, provision for bad debts, provision for discount on debtors and creditors.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – III	Basic concepts of cost accounting, elements of cost, classification of cost, preparation of cost sheet, inventory pricing, numerical through FIFO and LIFO methods.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group projects on Tally
Unit – IV	Cost volme, profit analysis, standard costing computation of material and labor variances, budgetary control, preparation of cash budget and flexible budget, Zero base budgeting.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on advancement of accounting
Unit - V	Management control and its characteristics, goals and strategies, structure and control. Responsibility centers and control centers: concept of responsibility centers, revenue centers, profit centers and investment centers, introduction of transfer pricing.	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES:-
By the end of this course, students should be able to:
- State the use and users of accounting information.
- Explain and apply accounting concepts, principles and applications.
- Record basic accounting transactions and prepare annual financial statements.

Text Books:
1. Bhattacharya S. K. and Dearden John, "Accounting for Management", Prentice Hall of India, New Delhi.
2. Chadwick, "The Essence of Financial Accounting", Prentice Hall of India, New Delhi.

Reference Books:
1. Chadwick, "The Essence of Management Accounting", PHI, India.
2. Subhash Sharma, "Management Control Systems (Text & Cases)", Tata McGraw Hill.
3. P. Sarvancel, "Management Control Systems"
4. Grewal, "Introduction to Book Keeping".

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Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/ universities Research and Academics System Analyst in State and Central Research organization, Consultant in Software firms,Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Logical reasoning, analysis of data, Organizing and Manipulating Data.	Quality Education, Decent Work and Economic Growth	Can start own Accountant consultancy

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SEMESTER- 2ᵈ
Course: PGDCA(PROFESSIONAL)
SUBJECT: OPERATING SYSTEM

Subject Code: 4TPDC201
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. To understand the basic knowledge of opps with C++ language.
2. To understand the Structure & classes concepts, data member.
3 To understand the Array, Pointers operations.
4 To understand the Function overloading & Operator Overloading.
5. To understand the Inheritance & C++I/O system.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Operating System :operating system, operating environment, history of operating system operating system component, operating system service, types of operating system, Operating system interaction ,interaction, important operating systems.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Probability for Data Analysis.
Unit – II	Process management and deadlock Introduction , definition of process, process scheduling , operation on process , interprocess communication Process Scheduling: Basic concept, Scheduling criteria scheduling algorithm, multiple processor scheduling. Dead lock: System model, deadlock characterization, method of handling deadlock, deadlock prevention, deadlock avoidance, deadlock detection, recovery from deadlock	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	Memory management and file System: Introduction , swapping , contiguous memory allocation paging , segmentation Virtual Memory :Definition of virtual memory, Demand paging, page replacement , allocation of frame , thrashing , memory mapped file. File System: file concept ,Access method , Directory structure , file system mounting , file sharing , protection, file system Structure , file system implementation , directory implantation , allocation method , NFS.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – IV	File Management and I/O System: File System: file concept ,Access method , Directory structure , file system mounting , file sharing , protection, file system Structure , file system implementation , directory implantation , allocation method , NFS.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – V	Introduction to unix : history of unix , why unix , unix components, logging on to unix system , using unix commands, terminal control keys, changing your pass word getting help. Unix file organization: file types, file names, file and directory commands, file access permission, standard unix file system, command summary	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Unix Operating System features

COURSE OUTCOMES :–

- Analyze the structure of OS and basic architectural components involved in OS design.
- Analyze and design the applications to run in parallel either using process or thread models of different OS.
- Analyze the various device and resource management techniques for timesharing and distributed systems.
- Understand the Mutual exclusion, Deadlock detection and agreement protocols of Distributed operating system.
- Conceptualize the components involved in designing a contemporary OS.

Text Books:

- • Operating system concepts silberscatz A and Peterson JL,PE-LPE.

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- Operating system concept & design Milenkovic M Mc graw hill
- Operating System H.M Deital

Reference Books:

- Operating system, stalling William,,Maxwell Mc millan int edition
- Operating System, Gupta Rajeev Kumar Chaturvedi Arun Kumar

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
System Admin, Technical support Engineer, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Basics of OS and its working, Organizing and Planning, Analysing	No poverty, Quality Education, Decent Work and Economic Growth	Can start own Computer Assistance services.

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SEMESTER- 2ᵈ
Course: PGDCA(PROFESSIONAL)
SUBJECT: INTRODUCTION TO COREL DRAW AND ADOBE PHOTOSHOP

Subject Code: 4TPDC203
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. This course is intended to provide basic drawing skills to the learners using CorelDraw & Adobe Photoshop application programs so that they will be able to create logos, photos, graphics, designs, etc.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Introduction to CorelDraw: Getting Started, Moving Around and Viewing Drawings, Customizing Options, Basic Drawing Skills Selecting and Manipulating Objects, Drawing and Shaping Objects, Arranging Objects.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	Using Text Working With Text, Using Text and Color Working With Color, Working With Paragraph Text, Special Text Effects. Layouts and Layers Special Page Layouts, Arranging Objects, Using Layers, Outlining and Filling Objects, Using Symbols and Clipart, Transforming Objects	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Case studies to understand organization of laptop like Dell, Lenovo etc.
Unit – III	Adding Special Effects Special Effects, Styles and Templates Using Styles and Templates, Advanced Effects Special Interactive Effects, Custom Creation Tools, Working With Bitmaps.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on application of Corel Draw
Unit – IV	Corel TRACE and Corel R.A.V.E. Using Corel TRACE, Using Corel R.A.V.E., Creating Output Exporting Drawings, Printing.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group discussions on different applications of Stack. Group projects on Corel TRACE and Corel R.A.V.E.
Unit – V	**Basics of Adobe Photoshop** Learn the tools and what they do, basic workflow, creating effective storing, batch renaming, how to save your photos, digital asset management File types, File sizes, Color types **Sizing Images:** Image Size and Resolution, Cropping, **Selecting Image Areas:** The Rectangular and Elliptical Marquee Tools , **Basic Retouching.**	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOMES: –

After completion of this course by the students, he/she would be able to:
- Design Artwork for print and publication.
- Design template for web.

Text Books:

- Straight to the point Corel Draw X3 by Dinesh Maidasani.
- Adobe Photoshop by BPB Publication

Reference Books:

- Corel Draw by BPB Publication

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Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Understand the feature of Coral Draw and Photoshop	NoPoverty,Quality Education, Decent Work and Economic Growth	Can start computer document shop

DR. C.V.RAMAN UNIVERSITY

KARGI ROAD, KOTA, BILASPUR (C.G.)

SEMESTER- 2ᵈ
Course: PGDCA(PROFESSIONAL)
SUBJECT: INTRODUCTION TO PAGE MAKER

Subject Code: 4TPDC202
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

Student will be able
1. The main objective of the subject is to enable learners to create and edit publications. The PageMaker course enables students to gain various skills required to design any publication.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	**Introduction to Desktop publishing** as a Process. Planning a publication. Managing large Projects. Publishing for print versus in-class use. Graphics and desktop publishing. Publication Purpose and effectiveness.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – II	PageMaker tools and Palettes, Creating a publication. Publication settings. Working with Objects. Creating type objects within PageMaker. Importing type from word processors. Type styling options. Creating a small poster.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on Desktop publishing
Unit – III	Working with text. Formatting options: Leading, Margins and indents. Kerning. Scaling text, Paragraph formatting options. Guides. Creating a Brochure, Working with threaded text. Working with graphics. Importing graphics files, and formats, accepted. Texts wrap options. Creating a newsletter.	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – IV	Working with master pages working with Grids. Creating frames. Essential design elements. Creating a booklet. Forms. .Line tools. Step and repeat functions.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – V	Working with tabs, Layers working with objects. Data merge function. Exporting PDF and HTML files for web Use.	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Seminar in PageMaker

COURSE OUTCOMES: -

After completing this course students are able to design and layout their own publication or printing projects. They also have different skills to work in Print and Publication Industry.

Reference Book:

1. PageMaker 7.0 A to Z by Campbell
2. Learning PageMaker by Ramesh Bangia

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization, Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Understand the feature of PageMaker	NoPoverty,Quality Education, Decent Work and Economic Growth	Can start computer photo editor shop

SEMESTER- 2ᵈ

Course: PGDCA(PROFESSIONAL)

SUBJECT: Computer accounting (Tally,Busy , Saral)

Subject Code: 4TPDC204

Theory Max. Marks: 50

Theory Min. Marks 17

COURSE OBJECTIVE:

- The objectives of the subject is to give exposure to the students, about fundamental accounting principles, techniques and their application in the business decision making process.

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	**UNIT-1** **Introduction-**About Key Strokes, Students Tally Versions, Faculty, Business Organization : Service org., Trading org., Manufacturing org. Accounting Principles, Concepts & Convention, Definition, Types of concepts, Types of Conventions, Transactions: Types of accounts, golden rules, Transaction: Types of Journal Book, Accounting voucher in Tally, Transaction: Compound Journal Entry, Mode of Accounting: Posting, Mode of Accounting : Trial balance, Financial Statement: Trading & P/L A/C. Processing Transaction in Tally Financial Statement: Balance Sheet, Processing Transaction in Tally, Provision Entries, Bank Reconciliation Statement	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	**Introduction to Tally**: Features of Tally, Getting Functional with Tally, Creation, Alteration & Deletion of Company in Tally, Ledgers and Groups Creations: Creation, Alteration & Deletion in Single and Multiple Mode, Recording Transaction, Backup and Restore, Report Generation	Usage of ICT :-Power Points, PDF, Video lectures, Black board,
Unit – III	Ledgers and Group Creation, Cost Centers: Creation, Alteration and view reports, Creation of Vouchers Types, Inventory: Stock Item, Stock Group, Stock Category, Unit of Measure., Bill wise details, VAT/CST Report generation, Cheque Printing and BRS, Interest Calculation: Simple mode, Interest Calculation: Advance Mode, Activation, view report, creation of voucher class, Invoicing, diff. actual and bill qty., Creation of Voucher class under sales, purchase, payment, ·	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Group projects on Tally
Unit – IV	Track additional cost of purchase, Bill of Materials, Inventory Voucher, Reorder levels, Multiple Currencies, TDS and Service Tax, Security Control, Tally Audit, Consolidation, Split, Export, and Import, ODBC, Web Enabled	Usage of ICT :-Power Points, PDF, Video lectures, Black board, Workshop on advancement of accounting using Tally
Unit – V	**Computerized Accounting Part II: Nac Stock-Accounting and Inventory,** creation of company, features and configuration, account ledger, data backup, data restore, creation of New year **Busy-**Introduction to Busy, system requirement, accounting with inventory, editing and deletion of company, Busy features and configuration, and bank reconciliation statements **Shubh Labh-**A well defined accounting package especially designed for Mandi traders. Brokerage and brokers management, Sales Tax forms management, accounting and inventory, creation of company, features and configuration, account ledger, account group, and voucher entry. **Tax Management**: Income from salary, house property, business & profession, capital gain and other sources, assessment of income PAN form 2C, 2D, **Saral,** and rebates and deductions	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOME:

- After learning this subject student will understand the fundamental principles and techniques of financial accounting so as to use these concepts for effective business decisions.
- Student learns about accounting software tally and their features.
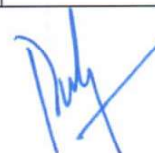
TEXT BOOKS:
- Shukla, S.M. Financial Accounting. Sahitya Bhawan Publication.
- Agrawal, M.L and Gupta, K.L. Cost Accounting. Sahitya Bhawan Publication.

REFERENCE BOOKS:
- Gupta, K.L. Management Accounting. Sahitya Bhawan Publication.

Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Training and Support in Institutions/universities Research and Academics System Analyst in State and Central Research organization, Consultant in Software firms,Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Logical reasoning, analysis of data, Organizing and Manipulating Data.	Quality Education, Decent Work and Economic Growth	Can start own Accountant consultency

SEMESTER- 2ᵈ
Course: PGDCA(PROFESSIONAL)
SUBJECT: INTRODUCTION TO INTERNET & WEB TECHNOLOGY

Subject Code: 4TPDC205
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

1. To understand the basic knowledge of computer
2. To understand the assembly-level programming
3. To understand the input output devices, storage media, memory .
4. To understand the concept of MIS, Networking devices

Syllabus:

Unit	Unit wise course contents	Methodology Adopted
Unit – I	Internet - Evolution, Protocols, Interface Concepts, Internet Vs Intranet, Growth of Internet, ISP, Connectivity - Dial-up, Leased line, VSAT etc., URLs, Domain names, Portals, Application. Word Wide Web (WWW) - History, Working, Web Browsers, Its functions, Concept of Search Engines, Searching the Web, HTTP, URLs, Web Servers, Web Protocols Browsers - features, services offered by browsers, browsers evaluation, extensions and plug-ins for browsers, some important plug-ins introduction like - flash, java, silverlight, etc. features of some major browsers - IE, Firefox, and Google Chrome.E-mail- Process, obtaining an e-mail address, types of email services - Web based and POP3. Understanding e-mail address, SMTP and MIME protocols, Using web based and pop3 e-mail - creating a message, sending a message, CC, BCC, replay, forward, reply to all, attach a document, add signature to mail, spam mails handling, junk mails, etc. email clients software - installation and configuration. Configuring and Using Outlook Express.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – II	File Transfer using FTP - FTP Process fundamentals, How to use FTP using browsers, FTP using client software like - Cute FTP, WS FTP, File Zilla etc. File formats and Transfer types, Anonymous and non-anonymous FTP. E-Mail - Concepts, POP and WEB Based E-mail ,merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free Email services. Internet Protocols - Data Transmission Protocols, Client/ Server Architecture & its Characteristics, FTP & its usages. Telnet Concept, Remote Logging, Protocols, Terminal Emulation, Massage Board, Internet chatting - Voice chat, text chat. Web publishing - Concepts, Domain name Registration, Space on Host Server for Web site, HTML, Design tools, HTML editors , Image editors, Issues in Web site creations & Maintenance, FTP software for upload web site.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – III	HTML - Concepts of Hypertext, Versions of HTML, Elements of HTML syntax, Head & Body Sections, Building HTML documents, Basic Tags of HTML - HTML Tag, TITLE Tag, BODY Tag, Formatting of Text - Headers, Formatting Tags, PRE Tag, FONT Tag, Size, Color and other attributes, Special Characters, Working with Images, META Tag, Links - Anchor tag, Lists - Unordered Lists, Ordered Lists, Definition Lists, Tables - TABLE, TR and TD Tags, Cell Spacing and Cell Padding, Colspan and Rowspan, Frames-Frameset, FRAME Tag, NOFRAMES Tag, Forms - FORM and INPUT Tag, Text Box, Radio Button, Checkbox, SELECT Tag and Pull Down Lists, Hidden, Submit and Reset, Some Special Tags - COLGROUP, THREAD, TBODY, TFOOT, _blank, _self, _parent, _top, IFRAME, LABEL, Attribute	Usage of ICT :-Power Points, PDF, Video lectures, Black board

		for <SELECT>, TEXTAREAIntroduction to WYSIWYG Design tools for HTML, Overview of MS FrontPage/ Macromedia Dreamweaver/ MS Expression Web and other popular HTML editors, designing web sites using MS FrontPage/ MS Expression Web.	
Unit – IV	Interface basics, Create your first page, View your page in browser, Insert hyperlinks , insert image, text alignment and formatting, Insert Images, bookmarks, setting up background, images and colors, Creating tables, table properties, cell properties, background pictures and colors, create list, bullets and headlines, Introduction to CSS, using CSS. Javascript Overview, Javascript vs. VBScript, Javascript vs. Java, Javascript versions, Script element,syntax& conventions. Variables, Expressions, Branching 85 Looping statements, Functions, Arrays Objects, Events 81; Document Object Model - onClick, onMouseOver, onSubmit, onFocus, onChange, onBlur. onLoad, onUnload. Alerts, Prompts 85 Confirms, Getting data with forms.	Usage of ICT :-Power Points, PDF, Video lectures, Black board
Unit – V	E - Commerce An introductions, Concepts, Advantages and disadvantages, Some popular E-commerce sites of World and India - Amazon, e-bay, rediff, irctc etc. (at least 10 from World and 10 from India) Technology in ECommerce, Internet 85 E-business, Applications, Feasibility & various constraints. E-transition challenges for Indian corporate. Electronic Payment Systems: Introduction, Types of Electronic Payment Systems, Digital Token-Based Electronic Payment Systems, Smart Cards and Electronic Payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic Payment Systems.	Usage of ICT :-Power Points, PDF, Video lectures, Black board

COURSE OUTCOME:-

After study this student will be able to know about programs based upon HTML and DHTML concepts,create animation & events based upon java script concepts, connect an application with database

Practical:

1. WAP which shows headings five time in ascending order. Align the heading also.
2. Write a program which show four paragraph under four headings.
3. Write a program for formatting the text &marked highlighted text.
4. Write a program for some text using CSS technique.
5. Write a program to insert an image in a page.
6. Write a program to make a table for any company employee's data record.
7. Write a program to make forms for different uses.
8. Write a java script to print the heading and paragraph & also create a button
9. Write a program to upload video on web page.
10. Write a program to change the back ground of any page.
11. Write a program to create a link between page.

Text Books:-

• Internet & Web Design A. Mansoor Pragya Publications.

Reference Books:-

• Learn HTML in a weekend, Steven E. Callihan, HI
• Using HTML, Lee Anne Phillips, PHI
• SAMS Teach YourselfJavascript in 24 Hrs. Michael Moncur, TechMedia
"Programming In Java", 2nd Edition, E. Balaguruswamy, TMH Publications ISBN 0-07-463542-5
• "Peter Norton Guide To Java Programming", Peter Norton, Techmedia Publications ISBN 81-87105-61-5
• JAVA, How to Program, Deitel&Deitel, PHI, Pearson

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Job Opportunities	Employability Skill Developed	Local/National/UNDP Goal Achieved	Entrepreneurship Opportunity
Web developer, web service provider, Training and Support in Institutions/universities, Research and Academics, System Analyst in State and Central Research organization,Consultant in Software firms, Quality Assurance and Testing in Public and Private sectors, Application Customization and Development, Start own venture	Enabling Knowledge, Critical Analysis, Problem Solving, Communication, Organizing and Planning, Analysing	No poverty, Quality Education, Decent Work and Economic Growth	Can start own Web designing company or network assistant and management organization

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SEMESTER- 2^d
Course: PGDCA
SUBJECT: PROJECT REPORT

Subject Code: 4TPDC206
Theory Max. Marks: 50
Theory Min. Marks 17

COURSE OBJECTIVE:

PATTERN :

A two-three weeks project topic will be assigned to each of the student in a group on the related topics studied in theSemester on which student shall prepare a project report and submit to the University. Detailed Guidelines related tothe Minor project can be obtained in the contact-class or can be downloaded from the website.

All the candidates of PGDCA (PROFESSIONAL) are required to submit a project-report based on the work done by him/her during the project period. A detailed Viva shall be conducted by an external examiner based on the project report.

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