DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES

SYLLABUS

(OFFICE AUTOMATION)

COURSE CODE: OME06

COURSE NAME: CVESD DIPLOMA IN OFFICE AUTOMATION

COURSE DURATION: ONE YEAR

SESSION: 2024-25

DEPARTMENT OF COMPUTER APPLICATION

DR. VIRENDRA SWARUP INSTITUTE OF VOCATIONAL STUDIES, MC ROBERT GANJ, CIVIL LINES, KANPUR (UP) 208001

Course Code	Course Name	L	T	P
		3	0	0
OME06-01	COMMUNICATION ENGLISH AND COMPUTER FUNDAMENTALS			

CO1	Inculcate Process of Communication and identify barriers in communication. Demonstrate the competency in English language through understandability and practice in four skills of language such as writing, speaking, reading and listening.
CO2	Develop skills for working in team and individually.
CO3	Inculcate soft skills and develop personality through participation in group discussion, mock interview, group and individual presentation.
CO4	Describe the usage of computers and why computers are essential components in business and society.
CO5	Understanding the concept of Computer memory and input/output devices of Computers and how it works and recognize the basic terminology used in computer programming.

Course Outcomes: At the end of the course, the student will be able to,

UNIT-1
Communication, the Process of Communication, Barriers of Communication, Different Types of Communication, Characteristics and Conventions of Conversation, Conversational Problems of Second/Foreign Language Users, Difference Between Conversation and Other Speech Events. Speaking and Listening, Conference Calls, Vocabulary Building, Writing, Grammar and Usage, Pronunciation, Job Applications and Interviews: Reading, Curriculum Vitae, Preparing for an Interview, Listening and Speaking in the Interviews Group Discussions: Group-Discussion, Study Skills, Language Focus, Speaking.

UNIT-2
Soft Skills Practice, Personality Development, Participating in Group Discussion and Job Interviews, Time Management Presentation Skills, Leadership Skills, Assertiveness, Lateral Thinking, Team Work and Interpersonal Skills, Emotional Intelligence, Self-Confidence and Courage, Attitude.

UNIT-3
Presentation Design and Delivery. Monologue Dialogue, Group Discussion. Effective Communication/ Mis-Communication. Interview, Public Speech. Effective Writing, Report Writing, Resume, Circular, Notice and letter Writing.

UNIT-4
Introduction to Computer: Definition - History & Generation of Computer (From First to 5th) - Applications of Computer – Advantages of Computer – Terms related to Computer - Characteristics of Computer: Speed, Storage, Versatility and Diligence – Hardware & Software. Block Diagram and Working Principle of Computer - Types of Computer: On the Basis of Working - Analog, Digital & Hybrid, On the Basis of Size - Main frame, Mini

Computer, Super Computer, Work station, Micro Computer, Desktop Computer, Laptop Computer

UNIT-5
Memory: Units, Representation, Types - Primary memory: RAM, ROM, PROM, EPROM, EEPROM, DDR Secondary memory: Hard disk, CD, DVD, Blue ray Disc, Pen Drive Magnetic tape & Zip disk – **CPU:** Components of CPU - Mother board, Hard disk, RAM, ROM, Processor, SMPS & Connecting wire - Graphics Card, Sound Card, Network Card – Modem; **Input, Output devices**: Keyboard, Mouse, Scanner, Digital Camera, Joystick, Pen drive, Monitor, Printer, Plotter – Connecting port – Serial, parallel – USB port.

Referential Books :

1. Wren and Martin -English Grammar and Composition
2. B. K. Das- an Introduction to Professional English and Soft Skills
3. Barun K. Mitra- Personality Development and Soft Skills
4. Fundamental of Computers – By P.K. Sinha
5. MS-Office 2000(For Windows) – By SteveSagman

Course Code	Course Name		L	T	P
			3	0	0
OME06-02	BASICS OF COMPUTER				

CO1	Demonstrate the knowledge of the basic structure, components, features and generations of computers.
CO2	Describe the concept of computer languages, language translators and construct algorithms to solve problems using programming concepts.
CO3	Compare and contrast features, functioning of internet.
CO4	Demonstrate architecture, functioning & services of the Internet , AWS etc.
CO5	Illustrate the emerging trends and technologies in the field of Information Technology.

UNIT-1

Introduction to Computer: Definition, Computer Hardware & Computer Software Components: Hardware – Introduction, Input devices, Output devices, Central Processing Unit, Memory- Primary and Secondary. Software - Introduction, Types – System and Application. Computer Languages: Introduction, Concept of Compiler, Interpreter & Assembler Problem solving concept: Algorithms – Introduction, Definition, Characteristics, Limitations, Conditions in pseudo-code, Loops in pseudo code.

UNIT-2

Operating system: Definition, Functions, Types, Classification, Elements of command based and GUI based operating system. Computer Network: Overview, Types (LAN, WAN and MAN), Data communication, topologies.

UNIT-3

Internet : Overview, Architecture, Functioning, Basic services like WWW, FTP, Telnet, Gopher etc., Search engines, E-mail, Web Browsers. Internet of Things (IoT): Definition, Sensors, their types and features, Smart Cities, Industrial Internet of Things

UNIT-4

Block chain: Introduction, overview, features, limitations and application areas fundamentals of Block Chain. Crypto currencies: Introduction , Applications and use cases Cloud Computing: It nature and benefits, AWS, Google, Microsoft & IBM Services

UNIT-5

Emerging Technologies: Introduction, overview, features, limitations and application areas of Augmented Reality , Virtual Reality, Grid computing, Green computing, Big data analytics, Quantum Computing and Brain Computer Interface

Referential Books :
1. Fundamental of Computers – By P.K. Sinha
2. Computer Today- By SureshBasandra
3. Rajaraman V., "Fundamentals of Computers", Prentice-Hall of India.
4. Norton P., "Introduction to Computers", McGraw Hill Education.

Course Code	Course Name	L	T	P
		3	0	0
OME06-03	OPERATING SYSTEM MS WINDOWS & LINUX			

CO1	Explain main components, services, types and structure of Operating Systems
CO2	Apply the various algorithms and techniques to handle the various concurrency control issues.
CO3	Compare and apply various CPU scheduling algorithms for process execution.
CO4	Identify occurrence of deadlock and describe ways to handle it.
CO5	Explain and apply various memory, I/O and disk management techniques.

UNIT-1
Introduction: Operating System Structure- Layered structure, System Components, Operating system functions, Classification of Operating systems- Batch, Interactive, Time sharing, Real Time System, Multiprocessor Systems, Multiuser Systems, Multi process Systems, Multithreaded Systems, Operating System services, Reentrant Kernels, Monolithic and Microkernel Systems.

UNIT-2
Concurrent Processes: Process Concept, Principle of Concurrency, Producer / Consumer Problem, Mutual Exclusion, Critical Section Problem, Dekker's solution, Peterson's solution, Semaphores, Test and Set operation, Classical Problem in Concurrency- Dining Philosopher Problem, Sleeping Barber Problem, Inter Process Communication models and Schemes, Process generation.

UNIT-3
CPU Scheduling: Scheduling Concepts, Performance Criteria, Process States, Process Transition Diagram, Schedulers, Process Control Block (PCB), Process address space, Process identification information, Threads and their management, Scheduling Algorithms, Multiprocessor Scheduling. Deadlock: System model, Deadlock characterization, Prevention, Avoidance and detection, Recovery from deadlock.

UNIT-4
Memory Management: Basic bare machine, Resident monitor, Multiprogramming with fixed partitions, Multiprogramming with variable partitions, Protection schemes, Paging, Segmentation, Paged segmentation, Virtual memory concepts, Demand paging, Performance of demand paging, Page replacement algorithms, Thrashing, Cache memory organization, Locality of reference.

UNIT-5
I/O Management and Disk Scheduling: I/O devices, and I/O subsystems, I/O buffering, Disk storage and disk scheduling, RAID. File System: File concept, File organization and access mechanism, File directories, and File sharing, File system implementation issues, File system protection and security.

Referential Books :
1. Silberschatz, Galvin and Gagne, "Operating Systems Concepts",Wiley Publication.
2. Sibsankar Halder and Alex A Arvind, "Operating Systems", Pearson Education.

Course Code	Course Name	L	T	P
		3	0	0
OME06-04	OFFICE APPLICATIONS – I MS OFFICE : MS WORD OPEN OFFICE : WRITER			

CO1	proficiency in basic functions of MS Word and Writer, including text formatting, paragraph formatting, and document layout.
CO2	Students will be able to create, edit, and format documents effectively using MS Word and Writer, including tasks such as inserting tables, images, and headers/footers.
CO3	Students will learn advanced formatting techniques such as styles, themes, and templates in MS Word and Writer to enhance the visual appeal and consistency of documents.
CO4	Understand and utilize collaborative editing features in MS Word and Writer, including track changes, comments, and version control, for effective teamwork and document management.
CO5	Able to organize and manage documents efficiently using features like document sections, headers/footers, bookmarks, and hyperlinks in MS Word and Writer.

UNIT-1

MS Word - Working with Documents -Opening & Saving files, Editing text documents, Inserting, Deleting, Cut, Copy, Paste, Undo, Redo, Find, Search, Replace, Formatting page & setting Margins, Converting files to different formats, Importing & Exporting documents, Sending files to others, Using Tool bars, Ruler, Using Icons, using help.

UNIT-2

Formatting Documents - Setting Font styles, Font selection- style, size, colour etc, Type face - Bold, Italic, Underline, Case settings, Highlighting, Special symbols, Setting Paragraph style, Alignments, Indents, Line Space, Margins, Bullets & Numbering.

UNIT-3

Setting Page style - Formatting Page, Page tab, Margins, Layout settings, Paper tray, Border & Shading, Columns, Header & footer, Setting Footnotes & end notes – Shortcut Keys; Inserting manual page break, Column break and line break, Creating sections & frames, Anchoring & Wrapping, Setting Document styles, Table of Contents, Index, Page Numbering, date & Time, Authoretc., Creating Master Documents, Web page.

UNIT-4

Creating Tables- Table settings, Borders, Alignments, Insertion, deletion, Merging, Splitting, Sorting, and Formula, Drawing - Inserting ClipArts, Pictures/Files etc., Tools – Word Completion, Spell Checks, Mail merge, Templates, Creating contents for books, Creating Letter/Faxes, Creating Web pages, Using Wizards, Tracking Changes, Security, Digital Signature.

UNIT-5
Printing Documents – Shortcut keys. Free Open Source Software:
OPEN OFFICE - WRITER: Introduction to Open Office Suite - Selecting the application package, Working with Documents- Formatting Documents - Setting Page style- Creating Tables - Drawing- Tools - Printing Documents - Operating with MS Word documents.

Referential Books :
1. Unix Concepts and Application – By SumitabhaDas
2. MS-Office 2000(For Windows) – By SteveSagman

Course Code	Course Name		L	T	P
			3	0	0
OME06-05	OFFICE APPLICATIONS – II MS OFFICE : MS-EXCEL OPEN OFFICE : CALC & MATH				

CO1	Proficiency in basic functions of MS Word and Writer, including text formatting, paragraph formatting, and document layout.
CO2	Students will be able to create, edit, and format documents effectively using MS Word and Writer, including tasks such as inserting tables, images, and headers/footers.
CO3	Students will learn advanced formatting techniques such as styles, themes, and templates in MS Word and Writer to enhance the visual appeal and consistency of documents.
CO4	Understand and utilize collaborative editing features in MS Word and Writer, including track changes, comments, and version control, for effective teamwork and document management.
CO5	Able to organize and manage documents efficiently using features like document sections, headers/footers, bookmarks, and hyperlinks in MS Word and Writer.

UNIT-1

MS Excel: Spread Sheet & its Applications, Opening Spreadsheet, Menus - main menu, Formula Editing, Formatting, Toolbars, Using Icons, Using help, Shortcuts, Spreadsheet types. Working with Spreadsheets- opening, Saving files, setting Margins, Converting files to different formats (importing, exporting, sending files to others), Spread sheet addressing - Rows, Columns & Cells, Referring Cells& Selecting Cells – Shortcut Keys.

UNIT-2

Entering & Deleting Data- Entering data, Cut, Copy, Paste, Undo, Redo, Filling Continuous rows, columns, Highlighting values, Find, Search & replace, Inserting Data, Insert Cells, Column, rows & sheets, Symbols, Data from external files, Frames, Clipart, Pictures, Files etc, Inserting Functions, Manual breaks

UNIT-3

Setting Formula - finding total in a column or row, Mathematical operations (Addition, Subtraction, Multiplication, Division, Exponentiation), Using other Formulae. Formatting Spreadsheets- Labelling columns & rows, Formatting- Cell, row, column & Sheet, Category - Alignment, Font, Border & Shading, Hiding/ Locking Cells, Anchoring objects, Formatting layout for Graphics, Clipart etc., Worksheet Row & Column Headers, Sheet Name, Row height & Column width, Visibility - Row, Column, Sheet, Security, Sheet Formatting & style, Sheet background, Colour etc, Borders & Shading – Shortcut keys.

UNIT-4

Working with sheets – Sorting, Filtering, Validation, Consolidation, and Subtotal. Creating Charts - Drawing. Printing. Using Tools – Error checking, Spell Checks, Formula Auditing, Creating & Using Templates, Pivot Tables, Tracking Changes, Security, Customization.

UNIT-5

OpenOffice-Calc - Introduction – Introduction to Spreadsheets, Overview of a Worksheet, Creating Worksheet & Workbooks, Organizing files, Managing files & workbooks, Functions & Formulas, Working with Multiple sheets, Creating Charts & Printing Charts – Operating withMS Excel documents, which are already created and saved in MS Excel.

Referential Books :

1. Fundamental of Computers – By P.K. Sinha
2. Computer Today- By SureshBasandra
3. Rajaraman V., "Fundamentals of Computers", Prentice-Hall of India.
4. Norton P., "Introduction to Computers", McGraw Hill Education.

Course Code	Course Name	L	T	P
		3	0	0
OME06-06	OFFICE APPLICATIONS – III MS OFFICE : MS-ACCESS OPEN OFFICE : BASE			

CO1	Proficiency in basic functions of MS Word and Writer, including text formatting, paragraph formatting, and document layout.
CO2	Students will be able to create, edit, and format documents effectively using MS Word and Writer, including tasks such as inserting tables, images, and headers/footers.
CO3	Students will learn advanced formatting techniques such as styles, themes, and templates in MS Word and Writer to enhance the visual appeal and consistency of documents.
CO4	Understand and utilize collaborative editing features in MS Word and Writer, including track changes, comments, and version control, for effective teamwork and document management.
CO5	Able to organize and manage documents efficiently using features like document sections, headers/footers, bookmarks, and hyperlinks in MS Word and Writer.

UNIT-1

MS Access: Introduction, Planning a Database, Starting Access, Access Screen, Creating a New Database, Creating Tables, Working with Forms, Creating queries, Finding Information in Databases, Creating Reports, Types of Reports, Printing & Print Preview – Importing data from other databases viz. MS Excel etc.

UNIT-2

OpenOffice-Base – Introduction- Database Concepts – Creating a New Database, Creating Tables, Working with Forms, Creating queries, Finding Information in Databases, Creating Reports, Types of Reports, Printing and Printing preview – Operating with other databases i.e. MS Access etc.

UNIT-3

Introduction to Forms What is Form, Create Form From Scratch, Record Source, Caption Property, Types of Basic Forms: Columnar, Tabular, Datasheet, Auto Center Property, Main/ Sub forms, Add and Resize Objects to Form, add headers and footers, add fields to form, add text to form, use label option button, check box, combo box, list box Forms Wizard, Row source, Name, control source, Source type, Column count, width, bound column ,List width ,limit to list, labels, Create Template. Save Form.

UNIT-4

Introduction to Reports, Forms vs Report, Create Report Using Wizard, From Scratch and Re save existing Report, Report Properties, Record Source, Caption for Report, Add Object to Report, Resize object, Types of Basic Reports: Single Column, Tabular Report Groups/Total, single table report, multi table report, Modify report, Add Page Header to Report, Resize text, Set up page

number on Report, Add Controls, Sub Report, preview report Print preview and Layout Preview, Sorting and grouping button, Expression Builder, print report, Creating Reports and Labels. Save Report.

Referential Books :
1. Fundamental of Computers – By P.K. Sinha
2. Computer Today- By SureshBasandra
3. Rajaraman V., "Fundamentals of Computers", Prentice-Hall of India.
4. Norton P., "Introduction to Computers", McGraw Hill Education.

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OME06-07	OFFICE APPLICATIONS – IV MS OFFICE : MS POWERPOINT OPEN OFFICE : IMPRESS			

CO1	Proficiency in basic functions of MS Word and Writer, including text formatting, paragraph formatting, and document layout.
CO2	Students will be able to create, edit, and format documents effectively using MS Word and Writer, including tasks such as inserting tables, images, and headers/footers.
CO3	Students will learn advanced formatting techniques such as styles, themes, and templates in MS Word and Writer to enhance the visual appeal and consistency of documents.
CO4	Understand and utilize collaborative editing features in MS Word and Writer, including track changes, comments, and version control, for effective teamwork and document management.
CO5	Able to organize and manage documents efficiently using features like document sections, headers/footers, bookmarks, and hyperlinks in MS Word and Writer.

UNIT-1
MS Power point: Introduction to presentation – Opening new presentation, Different presentation templates, Setting backgrounds, Selecting presentation layouts.

UNIT-2
Creating a presentation - Setting Presentation style, Adding text to the Presentation.

UNIT-3
Formatting a Presentation - Adding style, Colour, gradient fills, Arranging objects, Adding Header & Footer, Slide Background, Slide layout. Adding Graphics to the Presentation- Inserting pictures, movies, tables etc into presentation, DrawingPictures using Draw.

UNIT-4
Adding Effects to the Presentation- Setting Animation & transition effect. Printing Handouts, Generating Standalone Presentation viewer.

UNIT-5
OpenOffice-Impress - Introduction – Creating Presentation, Saving Presentation Files, Master Templates & Re-usability, Slide Transition, Making Presentation CDs, Printing Handouts – Operating with MS Power Point files / slides.

Referential Books :
1. Fundamental of Computers – By P.K. Sinha
2. Computer Today- By SureshBasandra

Course Code	Course Name	L	T	P
		3	0	0
OME06-08	**INTERNET & ADVANCED COMMUNICATION**			

CO1	Students will demonstrate a comprehensive understanding of the fundamental concepts of the Internet, including its history, infrastructure, protocols, and key technologies.
CO2	Students will be proficient in using web browsers effectively and employ advanced search techniques to locate and retrieve information from the Internet efficiently.
CO3	Will understand the principles of internet security and privacy, including common threats, encryption methods, secure browsing practices, and measures to protect personal information online.
CO4	Will explore and utilize a variety of online communication tools such as email clients, instant messaging applications, and video conferencing platforms for effective communication and collaboration.
CO5	Will learn strategies for managing personal and professional profiles on social media platforms, including content creation, engagement techniques, and reputation management.

UNIT-1
Internet and Web Browsers: Definition & History of Internet - Uses of Internet - Definition of Web-Addressing-URL-Different types of Internet Connections; Dial up connection.

UNIT-2
Broad band (ISDN, DSL, Cable), Wireless (Wi-Fi, WiMax, Satellite, Mobile) naming convention, browsers and its types, internet browsing, searching - Search Engines - Portals - Social Networking sites- Blogs - viewing a webpage

UNIT-3
downloading and uploading the website; Creating an email-ID, e-mail reading, saving, printing, forwarding and deleting the mails, checking the mails, viewing and running file attachments, addressing with cc and bcc.

UNIT-4
Introduction to various devices & Applications: Other than the computers, (electronic gadgets), which are widely using by executives in the Offices – Tablet, Smart Phone – concept of mobile phone and Tablet and their uses

UNIT-5
Various applications using by Tablets and Smart Phones such as UC browser, WhatsApp, Maps, Skype.

Referential Books :
1. "The Internet Book: Everything You Need to Know About Computer Networking and How the Internet Works" by Douglas E. Comer
2. Email Marketing Rules: A Step-by-Step Guide to the Best Practices that Power Email Marketing Success" by Chad S. White