Kashi Institute of Technology, Varanasi

(An Autonomous Institute Approved by AICTE)

Evaluation Scheme & Syllabus

For

Diploma Engineering 1st Year

(Diploma in Computer Science and Engineering)

(Effective from Session:2024-25)

MS 23KM, Varanasi – Prayagraj (Allahabad) Highway, Mirzamurad, Varanasi

Uttar Pradesh - 221307

Diploma in Computer Science and Engineering 1st Semester

S.N.	Course Category	Course Code	Course Title	Evaluation Scheme							
				Type	Periods			FA	SA	Total	Credit
					L	T	P				
1	HS	DHS101	COMMUNICATION SKILL – I	T	2	0	0	70	30	100	2
2	BS	DBS102	APPLIED MATHEMATICS-I	T	3	1	0	70	30	100	4
3	BS	DBS103	APPLIED PHYSICS	T	2	1	0	70	30	100	3
4	PC	DCSPC101	FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY	T	3	0	0	70	30	100	3
5	PC	DCSPC102	TECHNICAL DRAWING	T	0	0	8	70	30	100	2
6	HS	DHS123	COMMUNICATION SKILL-I LAB	P	0	0	2	70	30	100	1
7	BS	DBS124	APPLIED PHYSICS LAB	P	0	0	2	70	30	100	1
8	PC	DCSPC129	FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY LAB	P	0	0	2	70	30	100	1
9	ES	DES122	GENERAL WORKSHOP PRACTICE – I LAB	P	0	0	8	70	30	100	2
10	CCA	DCCA111	CO-CORRICULAR ACTIVITIES	-	-	-	-	-	-	100	0.5
11	GP	DGP112	GENERAL PROFICIENCY	-	-	-	-	-	-	100	0.5
Total				**-**	**10**	**2**	**22**	**630**	**270**	**1100**	**20**

Diploma in Computer Science and Engineering 2nd Semester

SN	Course Category	Course Code	Course Title	Evaluation Scheme							
				Type	Period			FA	SA	Total	Credit
					L	T	P				
1	BS	DBS201	APPLIED MATHEMATIC II	T	3	1	0	70	30	100	4
2	BS	DBS203	APPLIED CHEMISTRY	T	2	1	0	70	30	100	3
3	PC	DCSPC201	FUNDAMENTAL OF ELECTRICAL AND ELECRONICS ENGINEERING	T	2	1	0	70	30	100	3
4	PC	DCSPC202	CONCEPT OF PROGRAMMING USING C	T	4	0	0	70	30	100	4
5	BS	DBS223	APPLIED CHEMISTRY LAB	P	0	0	2	70	30	100	1
6	PC	DCSPC221	FUNDAMENTAL OF ELECTRICAL AND ELECRONICS ENGINEERING LAB	P	0	0	2	70	30	100	1
7	PC	DCSPC222	CONCEPT OF PROGRAMMING USING C LAB	P	0	0	2	70	30	100	1
8	PC	DCSPC224	OFFICE AUTOMATION TOOLS LAB	P	0	0	4	70	30	100	2
9	CCA	DCCA211	CO-CORRICULAR ACTIVITIES	-	-	-	-	-	-	100	0.5
10	GP	DGP212	GENERAL PROFICIENCY	-	-	-	-	-	-	100	0.5
Total				**-**	**11**	**3**	**10**	**560**	**240**	**1000**	**20**

FA: Formative Assessment, **SA**: Summative Assessment, **L**: Lecture, **T**- Tutorial, **P:** Practical

Abbreviation Used:

PCC: Professional Core Courses
HSMC: Humanities, Social Science and Management Course
MOOC: Massive Open Online Course
CCA: Co-Curricular Activities
MC: Mandatory Courses
ESC: Engineering Science Courses
BSC: Basic Science Courses

DETAILED SYLLABI
DIPLOMA 1St Year

- Computer Science & Engineering

(Effective from Session: 2024-25)

(Common to all Diploma Courses)						
Department : CSE/CE/ME/EE /ME P				**Programme** : Polytechnic		
Semester : I				**Course Category Code : HS**		
Course Code:	**Course**			**Period / Week**		**Credit**
				L	**T**	**P**	**C**
DHS101	Communication Skills -I			2	0	0	2
Prerequisite	**After completion of the course students are able to -**						**Bloom's Level**
Course Outcome	**CO1**	*Introduce, converse, show interest and respond.*					K1,K3
	CO2	*Improve decisions through practical exercises, cases.*					K3
	CO3	*Improve Reading skills*					K3,K5
	CO4	*Present, write effectively and give feedback.*					K2,K3
	CO5	*Improve his communication related to industry based.*					K2,K3
UNIT - I	**BASICS OF COMMUNICATION FOR CAREER DEVELOPMENT**						**Contact Hours: 8**
Meaning of Communication, Role and Scope of Communication, Barriers of Communication, Types of Communication, Process of Communication, Role of Communication in Corporate field.							**CO1**
UNIT – II	**APPLICATION OF GRAMMAR**						**Contact Hours: 8**
Verb, Tense, Active & Passive voice, Direct & Indirect speech.							**CO2**
UNIT – III	**READING SKILLS**						**Contact Hours: 8**
Unseen passage for comprehension (one word substitution, prefixes, suffixes, antonyms, synonyms etc. based upon the passage to be covered under this topic)							**CO3**
UNIT – IV	**WRITING SKILLS**						**Contact Hours: 8**
Email writing, Letter/Report writing, CV/Resume creation, paragraph writing, notice writing.							**CO4**
UNIT 5	**INTERVIEW SKILLS & SELF ANALYSIS**						**Contact Hours : 8**
Giving self-Introduction, Telephonic Interviews, Etiquettes to follow during an interview session, Swat analysis.							**CO5 Contact Hours : 8**
Lecture Hour 40		**TUTORIAL HOURS 0**					**TOTAL 40**

Reference Books:

1. How to Win Friends and Influence People by Dale Carnegie Simon and Schuster, 1936.
2. Advance English Grammar by D.S. Paul
3. Business Communication by M. Raman, Oxford University Press.
4. Word Power Made by Easy by Norman Lewis
5. 30 days to Better English by Norman Lewis
6. Learn English Through Hindi

Department : CSE/ME/CIVIL/EE			Programme: Polytechnic			
Semester : I			Course Category Code : HS			
Course Code	Course		Period/Week			Credit
			L	T	P	C
DHS123	COMMUNICATION SKILL-I LAB		-	-	2	1
Prerequisite	*At the end of this course, the students will be able to:*					
Course Outcome	CO1	*Able to speak correctly in a grammatical form*				
	CO2	*Improvement o f Listening ability*				
	CO3	*Write various types of paragraphs, notices for different purposes and composition onpicture with appropriate format*				
	CO4	*Reproduce and match words and sentences in a paragraph*				
	CO5	*Understand the importance of effective communication*				

List of Practical

1. Listening and Speaking Exercises	CO1
2. Self and peer introduction	
3. Newspaper Reading	CO2
4. Just a minute session - Extempore	
5. Greeting and starting a conversation	CO3
6. Discuss about likes and dislikes	
7. Group Discussion	C04
8. Mock Interviews Practice	
9. Short story telling (Moral and Brief Summary)	C05
10.Enrichment of English Vocabulary	

(Common to all Diploma Courses)						
Semester : **I**			Course Category Code : **BS**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS102	**Applied Mathematics I**		**3**	**1**	**0**	**4**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Understand the concept of Arithmetic mean and Geometric mean and linear equation.*				K_2
	CO2	*Apply dot & cross product of vectors to find the solution of engineering problems and Use complex numbers in various engineering problems.*				K3,
	CO3	*Understand the concept of Relation between sides and angles of a triangle*				K2
	CO4	*Apply differential calculus and higher order to solve engineering problems.*				K3
	CO5	*Find velocity, acceleration, errors and approximation in engineering problems with application of derivatives.*				K3,K4
UNIT – I	**Algebra-I**					**Contact Hours : 12**
Arithmetic Mean: nth term, sum, Mean Geometric Mean: nth term, sum, Mean. Determinants: Elementary properties of determinants of order 2 and 3, system of linear equations and solution, Cramer`s Rule.						**CO1**
UNIT – II	**Algebra-II**					**Contact Hours : 12**
Vector Algebra: Dot and cross product, Scalar and vector triplet product. Complex Numbers: Representation, Modulus and Amplitude. De-Moivre theorem application in solving algebraic equations.						**CO2**
UNIT – III	**Trigonometry**					**Contact Hours : 08**
Relation between sides and angles of a triangle: Statement of various formula showing relationship between sides and angles of a triangle.						**CO3**
UNIT – IV	**Differential Calculus-I**					**Contact Hours : 15**
Functions, limits, continuity, elementary methods of finding limit (right and left)Method of finding derivatives, functions of a function, Logarithmic Differentiation.						**CO4**
UNIT – V	**Differential Calculus-II**					**Contact Hours : 08**
Higher order derivatives of Special Functions (Exponential, Logarithmic, and Inverse circular functions).						**CO5**
Lecture Hours : 40		**Tutorials Hours :15**				**Total : 55**

Reference Books:

1. *Elementary Engineering Mathematics by BS Grewal, Khanna Publishers, New Delhi*
2. *Engineering Mathematics, Vol I & II by SS Sastry, Prentice Hall of India Pvt. Ltd.,*
3. *Applied Mathematics-I by Chauhan and Chauhan, Krishna Publications, Meerut.*

Text Book

1. *Applied Mathematics-I (A) by Kailash Sinha and Varun Kumar; Aarti Publication, Meerut*

(Common to all Diploma Courses)						
Semester : **I**			Course Category Code : **BS**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS103	**Applied Physics**		**2**	**1**	**0**	**3**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Understanding the concept of measurement of physical quantity and units*				K_2
	CO2	*State and explain Newton's first law of motion,Identify the give example of (types of) forces,Compare and contrast speed, velocity and acceleration.*				K_1,K4,K_2,
	CO3	*Understand the concept of work and how to calculate the work done by force.Understand the concept of the net work done on an object and how that relates to a change in speed of the object.Understand the concept of power .*				K_2,K_3
	CO4	*In this unit on matter, students learn to differentiate physical and chemical changes in matter. They also learn that matter is made up of small particles called atoms and molecules.*				K_2,K_4
	CO5	*Ability to understand the basic concepts of thermodynamics such as temperature, pressure, system, properties, process, state, cycle and equilibrium.*				K_2,,K_5
UNIT – I	**Unit and Dimensions**					**Contact Hours : 09**
1.1 Need of Measurement in engineering and science, unit of a physical quantities - fundamental and derived units, systems of units (FPS, CGS and SI units) 1.2 Dimensions and dimensional formulae of physical quantities. 1.3 Principle of homogeneity of dimensions 1.4 Limitation of dimensional analysis 1.5 Accuracy and precision of instruments, rules for representing significant figures in calculation.						**CO1**
UNIT – II	**Force and Motion**					**Contact Hours : 09**
2.1 Scalar and vector quantities – examples, representation of vector, types of vectors 2.2 Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only), Scalar and Vector Product. 2.3 Resolution of Vectors. 2.4 Force, Momentum, Statement and Derivation of Conservation of linear momentum, its applications such as recoil of gun. 2.5 Circular motion (Uniform and Non-uniform), definition of angular displacement, angular velocity, angular acceleration, frequency, time period. 2.6 Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical) 2.7 Central force, Expression and Applications of Centripetal and centrifugal forces.						**CO2**
UNIT – III	**Work, Power and Energy**					**Contact Hours : 12**
3.1 Work: and its units, examples of zero work, positive work and negative work, Conservative and non-conservative force. 3.2 Friction: modern concept, types, laws of limiting friction, Coefficient of friction 3.3 Work done in moving an object on horizontal and inclined plane for rough and planesurfaces with its applications 3.4 Energy and its units: Kinetic energy and potential energy with examples and their derivation, work energy theorem. 3.6 Power and its units, calculation of power in numerical problems.						**CO3**

UNIT – IV	Properties of Matter	Contact Hours : 09
4.1 Elasticity: definition of stress and strain, different types of modulus of elasticity, Hooke's law, significance of stress strain curve. 4.2 Pressure: definition, its units, atmospheric pressure, gauge pressure, absolute Pressure. 4.3 Surface tension: concept, its units, angle of contact. 4.4 Viscosity and coefficient of viscosity: Terminal velocity, Stokes's law and effect of temperature on viscosity, application in hydraulic systems. 4.5 Concept of fluid motion, stream line and turbulent flow, Equation of continuity, Bernoulli's Theorem and their applications.		**CO4**
UNIT – V	**Heat and Thermodynamic**	**Contact Hours : 09**
5.1 Difference between heat and temperature. 5.2 Modes of transfer of heat (Conduction, convection and radiation with examples). 5.3 Different scales of temperature and their relationship. 5.4 Isothermal and Adibatic process. 5.5 Zeroth, First and second law of thermodynamics, Heat engine (concept Only), Carnotcycle.		**CO5**
Lecture Hours : 36	**Tutorials Hours :12**	**Total : 48**

Reference Books:

1 *Text Book of Physics for Class XI (Part-I, Part-II); N.C.E.R.T., Delhi*

2 *Concepts in Physics by HC Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi*

3 *Comprehensive Practical Physics, Vol, I & II, JN Jaiswal, Laxmi Publications (P) Ltd., New Delhi*

4 *Engineering Physics by PV Naik, Pearson Education Pvt. Ltd, New Delhi*

5 *Engineering Physics by DK Bhhatacharya & Poonam Tandan; Oxford University Press, New Delhi*

Department:**CSE**			Programme: **Diploma**			
Semester : **I**			Course Category Code : **BS**			
Course Code	Course		Period/Week			Credit
			L	T	P	C
DBS124	**Applied Physics Lab**		**0**	**0**	**2**	**1**
Prerequisite	***At the end of this course, the students will be able to:***					
Course Outcome	**CO1**	*Understand the concept of rotational motion of a rigid body and its applications*				
	CO2	*Describe conservation of energy and its applications*				
	CO3	*Express physical work in term of heat and temperature; Measure temperature in various processes on different scales (Celsius, Kelvin, Fahrenheit etc.)*				
	CO4	*Distinguish between conduction, convection and radiation, identify the different methods for reducing heat losses*				
	CO5	*Understand the laws of thermodynamics, Carnot cycle and their applications.*				

List of practical:

1. To find radius of wire and its volume and the maximum permissible error in these quantities by using both verniercalipers and screw gauge.	**CO1**
2. To find the value of acceleration due to gravity on the surface of earth by using a simple pendulum.	**CO2**
3. To verify parallelogram law of forces	**CO3**
4. To find the Moment of Inertia of a flywheel about its axis of rotation	**CO4**
5. To determine the Radius of curvature of (i) convex mirror, (ii) concave mirror by Spherometer	**CO5**
6. To determine the atmospheric pressure at a place using Fortin's Barometer	**CO5**

(Common to all Diploma Courses)						
Semester : I				**Course Category Code : PC**		
Course Code	**Course**		**Period / Week**			**Credit**
			L	**T**	**P**	**C**
DCSPC101	**FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY**		**3**	**0**	**0**	**3**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Understand a computer system that has hardware and software components, which controls and makes them useful.*				K_2, K_3
	CO2	*Understand the operating system as the interface to the computer system.*				K_2
	CO3	*Outline various application of IT*				K_3
	CO4	*Differentiate between assembly and high level language*				K_2
	CO5	*Identify various web browser, Use the Internet to send mail and surf the World Wide Web*				K_2, K_3
UNIT – I	**Fundamentals of Computer**					**Contact Hours : 08**
Historical evolution of computers, Generations of computers, Classification of computers - based on size, processor, Usefulness of Computers. Applications of computers, Block Diagram along its components and characteristics, Interaction between the CPU, Memory Input/output devices, function of CPU and major functional parts of CPU. Types of Memory- RAM ROM, Monitor, Mouse, Keyboard, Disk, joysticks, Storage Devices, floppy disk, CD, DVD, Pen drive, trackballs, Printers Types of printers, Scanner, Modem, Video, Sound cards, Speakers						**CO1**
UNIT – II	**Data Representation**					**Contact Hours : 08**
Definition Of Information, difference between data and information ,importance of Binary Number System, various number systems, Conversion from Decimal to Binary, Conversion from Binary to Decimal, binary number into hexadecimal number, hexadecimal number into binary number System, Memory Addressing and its Importance, ASCII and EBCDIC coding System						**CO2**
UNIT – III	**System Software and Application Software**					**Contact Hours : 08**
Hardware and Software, Types of Software, Introduction and need of operating system, Types of operating system, System Software, Application Software, Virtualization Software, Utility Software, MS Office/Open Office/Libreoffice, Working with window, Desktop components, Menu bars, creating shortcut of program. Installation of Application softwares, Antivirus and Drivers.						
UNIT – IV	**DOS & Windows Operating Systems**					**Contact Hours : 08**
Dos operating system, Types of dos Commands, operating system as a resource manager; BIOS; System utilities - Editor, Loader, Linker, File Manager. Concept of GUI and CUI standards. Directories and files, features of Window desktop, components of Window, function of each component of Window, method of starting a program using start button, Understand maximize, minimize, restore down and close button, uses of file and folder, method of viewing the contents of hard disk drive using explore option, control panel, disk defragmentation installation and un installation of the application software.						**CO3**
UNIT – V	**Fundamentals of Internet**					**Contact Hours : 08**
Concepts of computer Network, Client Server Model, Peer to Peer Model, Networking Devices: Switch, Router, Hub, Bridge, Gateway, LAN, MAN, WAN, Topology, Internet, Intranet, Extranet, internet service provider and its relevance, role of the modem in accessing						**CO4**

the internet, purpose of web browser software, URL,URI, URN, WWW, FTP,HTTP,RDC(Remote Desktop Connection), Telnet, Email, process of sending and receiving e-mail, transmission modes, search engines, social network sites, internet security, Firewall, Cloud Computing and its services.		
Lecture Hours : 40	**Tutorials Hours :00**	**Total : 40**

MEANS OF ASSESSMENT

- Assignments and quiz/class tests, mid-term and end-term written tests
- Actual laboratory and practical work, exercises and viva-voce
- Software installation, operation, development and viva-voce

Reference Books:

1. Fundamentals of Computer by E Balagurusamy,Tata McGraw Hill EducationPvt.Ltd, New Delhi
2. Fundamentals of Computer by V Rajaraman; Prentice Hall of India Pvt. Ltd., NewDelhi
3. Computer Fundamentals by RS Salaria; Khanna Book Publishing Co. (P) Ltd., NewDelhi
4. Computers Today by SK Basandara, Galgotia publication Pvtltd. Daryaganj, NewDelhi.

Department: Computer Science and Engineering			Program: Diploma			
Semester : I			Course Category Code : PC			
Course Code	Course		Period/Week			Credit
			L	T	P	C
DCSPC129	FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY LABORATORY		-	-	2	1
Prerequisite	*At the end of this course, the students will be able to:*					
Course Outcome	CO1	*Understand a computer system that has hardware and software components, which controls and makes them useful.*				
	CO2	*Understand the operating system as the interface to the computer system.*				
	CO3	*Outline various application of IT.*				
	CO4	*Differentiate between assembly and high level language.*				
	CO5	*Identify various web browser, Use the Internet to send mail and surf the World Wide Web.*				

FUNDAMENTALS OF COMPUTER AND INFORMATION TECHNOLOGY	
1. Familiarization with Computer System and its peripheral devices 2. Familiarization with Operating System 3. Practice of internal and external commands of DOS	**CO1**
4. Working practice on windows operating system: a. Creating File b. Creating Folder c. Copying Folder and Files d. Moving Folder and Files e. Deleting Folder and Files 5. Installing and uninstalling of new software using control panel.	**CO2**
6. Installation and uninstallation of new hardware drivers using control panel. 7. Procedure of disk partition and its operation (Shrinking, Extending, Delete, Format). 8. Installation of Operating Systems	**CO3**
9. Changing resolution, color, appearances, and screensaver option of the display 10. Changing System Date and Time. 11. User Account creation and its feature on Windows Operating System	**CO4**
12. Email Account creation, reading, writing and sending email with attachments. 13. Internet browsing using browsers. 14. Using of Search Engine to get information from internet	**CO5**

(Common to all Diploma Courses)						
Semester : I			**Course Category Code : PC**			
Course Code	**Course**		**Period / Week**			**Credit**
			L	**T**	**P**	**C**
DCSPC102	**TECHNICAL DRAWING**		**0**	**0**	**8**	**2**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Draw orthographic projections of different objects.Visualize three dimensional objects and draw Isometric Projections.*				K_1,K_2,K_4
	CO2	*Use the techniques and able to interpret the drawing in Engineering field.*				K_2,K_3
	CO3	*Draw exploded views of components & assemblies in preparation of service drawing.*				K_2,K_3,K_4,K_5
	CO4	*Draw free hand sketches of the schematic diagrams of electronic circuits, using standard symbols.*				K_2,K_3
	CO5	*Prepare drawing from the rough sketches provide and/or enlarge/reduce the given drawing to the desired scale.*				K_3,K_5,K_6
UNIT – I	**Drawing Instruments and their uses**					**Contact Hours : 08**
Letters and numbers (single stroke vertical), Convention of lines and their applications. Scale (reduced, enlarged & full size) plain scale and diagonal scale. Sheet layout. Geometrical constructions.						**CO1**
UNIT – II	**Active Devices**					**Contact Hours : 08**
Semiconductor : Rectifier diode, Zener diode, Varacter diode, Tunnel diode, Photo, Light emitting diode (LED), Bipolar transsitor, junction field effect transistor (JFET), Mosfet, Photo transistor, Uni junction transistor (UTJ), Silicon control rectifier (SCR), Diac, Triacs outlines (with their types numbers e.g TO3, TO5, TO18, TO39, TO65 etc) of the different types of semiconductor diodes, Transistors Scrs, Diacs, Triacs and ICs (along with indicators for pin identification etc.)						**CO2**
UNIT – III	**Orthographic Projections & Isometric Projection**					**Contact Hours : 08**
PART A- Orthographic Projections: Introduction to Orthographic projections. Conversion of pictorial view into Orthographic, Views (First Angle Projection Method Only), Dimensioning technique as per SP-46 **PART B-Isometric projection:** Isometric scale, Conversion of orthographic views into isometric View/projection (Simple objects) Projection of Straight Lines and Planes.(First Angle Projection Method only)						**CO3**
UNIT – IV	**Logic gates(With the help of rough sketch/clues given)**					**Contact Hours : 08**
Draw standard symbols of NOT, AND, NAND, OR, NOR XOR, Expandable & Tristate gates,						
UNIT – V	**Circuit Diagram (With the help of rough sketch/cluesgiven)**					**Contact Hours : 08**
Circuit of UPS, Block diagram of an Electronic multimeter, Circuit of Modem, Circuit diagram of Voltage stabilizers, Connection wiring diagrams, Point to point pictorial, P.C.Blayout of a single electronic circuit ona graph sheet.						**CO5**
Lecture Hours : 30		**Tutorials Hours :10**				**Total : 40**
Reference Books:						

(Common to all Diploma Courses)						
Semester : **I**			Course Category Code : **ES**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DES122	**GENERAL WORKSHOP PRACTICE – I LAB**		**0**	**0**	**8**	**2**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Identify tools and equipment used and their respective functions.*				K_1, K_2, K_4
	CO2	*Identify different types of materials and their basic properties.* *Use and take measurements with the help of basic measuring tools/equipment.*				$K_2, K3, K_5$
	CO3	*Select proper tools for a particular operation.* *Select materials, tools, and sequence of operations to make a job as per given specification/drawing.*				K_3, K_4, K_5
	CO4	*Prepare simple jobs independently and inspect the same.* *Follow safety procedures and precautionary measures.*				$K5, K_3$,
	CO5	*Use safety equipment and Personal Protection Equipment.*				K_3,,K_6
UNIT – I	**CARPENTRY SHOP**					**Contact Hours:**
1.1 General Shop Talk 1.1.1 Name and use of raw materials used in carpentry shop : wood &alternative materials 1.1.2 Names, uses, care and maintenance of hand tools such as different types ofSaws, C-Clamp, Chisels, Mallets, Carpenter's vices, Marking gauges,Try-squares, Rulers and other commonly used tools and materials used incarpentry shop by segregating as cutting tools, supporting tools, holdingtools , measuring tools etc. 1.1.3 Specification of tools used in carpentry shop. 1.1.4 Different types of Timbers, their properties, uses & defects. 1.1.5 Seasoning of wood. 1.2. Practice 1.2.1 Practices for Basic Carpentry Work 1.2.2 Sawing practice using different types of saws 1.2.3 Assembling jack plane — Planning practice including sharpening of jackplane cutter 1.2.4 Chiselling practice using different types of chisels including sharpening ofchisel 1.2.5 Making of different types of wooden pin and fixing methods. Marking measuring and inspection of jobs. 1.3 Job Practice Job 1 Marking, sawing, planning and chiselling and their practice Job II Half Lap Joint (cross, L or T – any one) Job III Mortise and Tenon joint (T-Joint) Job IV Dove tail Joint (Lap or Bridle Joint)						**CO1**
UNIT – II	**PAINTING AND POLISHING SHOP**					**Contact Hours:**
2.1. Introduction of paints, varnishes, Reason for surface preparation, Advantages of Painting, other method of surface coating ie. Electroplating etc. 2.2. Job Practice Job 1: To prepare a wooden surface for painting apply primer on one side and topaint the same side. To prepare french polish for wooden surface andpolish the other side. Job II: To prepare metal surface for painting, apply primer and paint the same. Job III: To prepare a metal surface for spray painting, first spray primer andpaint the same by spray painting gun and compressor system. The sequence of polishing will be as follows: i) Abrasive cutting by leather wheel ii) Polishing with hard cotton wheel and with polishing material iii) Buffing with cotton wheel or buff wheel.						**CO2**

UNIT – III	ELECTRICAL SHOP	Contact Hours:
3.1 Study, demonstration and identification of common electrical materials with standard ratings and specifications such as wires, cables, switches, fuses, cleats, clamps and allied items, tools and accessories. 3.2 Study of electrical safety measures and protective devices. Job I Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pinplugs. Job II Carrying out house wiring circuits using fuse, switches, sockets,ceiling rose etc. in batten or P.V.C. casing-caping. 3.3 Study of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. 3.4 Introduction to the construction of lead acid battery and its working. Job III Installation of battery and connecting two or three batteries inseries and parallel. 3.5 Introduction to battery charger and its functioning. Job IV Charging a battery and testing with hydrometer and celltester		**CO3**
UNIT – IV	**SMITHY SHOP**	**Contact Hours:**
4.1. General Shop Talk 4.1.1 Purpose of Smithy shop 4.1.2 Different types of Hearths used in Smithy shop 4.1.3 Purpose, specifications, uses, care and maintenance of various tools and equipments used in hand forging by segregating as cutting tools, supporting tools, holding tools, measuring tools etc. 4.1.4 Types of fuel used and maximum temperature obtained 4.1.5 Types of raw materials used in Smithy shop 4.1.6 Uses of Fire Bricks & Clays in Forging workshop. 4.2 Practice 4.2.1 Practice of firing of hearth/Furnace, Cleaning of Clinkers and Temperature Control of Fire. 4.2.2 Practice on different basic Smithy/Forging operations such as Cutting, Upsetting, Drawing down, Setting down, Necking, Bending, Fullering, Swaging, Punching and Drifting		**CO4**
UNIT – V	**PLUMBING SHOP**	**Contact Hours:**
5.1. Use of personal protective equipments, safety precautions while working and cleaning of shop. 5.2. Introduction and demonstration of tools, equipment and machines used inplumbing shop. 5.3. Introduction of various pipes and pipe fittings of elbow, nipple, socket, union etc. 5.4. Job Practice Job 1 : Preparation of job using elbow, bend and nipple Job II: Preparation of job using Union, Tap, Plug and Socket. Job III: Threading practice on pipe with die		**CO5**

Reference Books:

1. *Workshop Technology Vol. I, II, III by Manchanda; India Publishing House, Jalandhar.*
2. *Workshop Training Manual Vol. I, II by S.S. Ubhi; Katson Publishers, Ludhiana.*
3. *Manual on Workshop Practice by K Venkata Reddy; MacMillan India Ltd., New Delhi*
4. *Basic Workshop Practice Manual by T Jeyapoovan; Vikas Publishing House (P) Ltd., New Delhi*
5. *Workshop Technology by B.S. Raghuwanshi; Dhanpat Rai and Co., New Delhi*
6. *Workshop Technology by HS Bawa; Tata McGraw Hill Publishers, New Delhi.*

(Common to First year)						
Semester : **II**			Course Category Code : **BS**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS201	**APPLIED MATHEMATICS-II**		**3**	**1**	**0**	**4**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Calculate simple integration by methods of integration.*				K3,K4
	CO2	*Evaluate the area under curves, surface by using definite integrals.*				K2,K3
	CO3	*Solve the engineering problems with numerical methods .*				K3
	CO4	*Explain the function of the system components including Processor, Motherboard and Input-output devices.*				K2
	CO5	*Understand the geometric shapes used in engineering problems by co-ordinate geometry.*				K2,K3
UNIT – I	**Integral Calculus - I**					**Contact Hours : 16**
(i) Methods of Indefinite Integration : (ii) Integration by substitution. (iii) Integration by rational functions. (iv) Integration by partial function. (v) Integration by parts.						**CO1**
UNIT – II	**Integral Calculus - II**					**Contact Hours : 12**
Meaning and properties of definite integrals, Evaluation of definite integrals. Simposns 1/3rd and Simposns3/8th rule and Trapezoidal Rule : their application in simple cases.						**CO2**
UNIT – III	**Numerical solutions**					**Contact Hours : 08**
Numerical solutions of algebraic equations; Bisections method, Regula Falsi method, Newton-Raphson's method(without proof), Numerical solutions of simultaneous equations; Gauss elimination method(without proof).						**CO3**
UNIT – IV	**Co-ordinate Geometry (2 Dimension)**					**Contact Hours : 08**
Equation of circle in standard form. Centre - Radius form, Diameter form, Two intercept form.						**CO4**
UNIT – V	**Co-ordinate Geometry (3 Dimension)**					**Contact Hours : 08**
Straight lines and planes in space. Distance between two points in space, direction cosine and direction ratios, Finding equation of a straight line (without proof).						**CO5**
Lecture Hours : 39		**Tutorials Hours :13**				**Total : 52**

Reference Books:

1. *Applied Mathematics-II by Ajay Kumar ,Jai Prakash Nath Publication Merrut.*
2. *Applied Mathematics-II by H.R. Luthera, Bharat Bharati Publication Merrut*
3. *Applied Mathematics-II by Kailash Sinha , BBP Publication,Merrut*

(Common to ME& CSE)						
Semester : **II**			Course Category Code : **BS**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS203	**Applied Chemistry**		**2**	**1**	**0**	**3**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Describe the three subatomic particles in an atom. Explain the differences between protons, neutrons, and electrons. Recap the characteristics of elements in the Periodic table. Differentiate between polar and non polar covalent*				K1,K2
	CO2	*Developing the basic idea about lubricant and also help us to understand the different sources of water.*				K2,K3,K_5
	CO3	*Student will be able to define water. Explain the role of water for human and plants. Discuss and explain water cycle.*				K_2
	CO4	*Identify the primary oxidation and reduction reaction for corrosion. Differentiate between general corrosion and localized corrosion.*				K2,K4
	CO5	*Understand how the thermodynamic of organic reaction define the direction and kinetics define the rate at which they proceed. Provides important information regarding Molecular weight, Glass transition temperature &Crystallization of Polymers.*				K1,K2,K6
UNIT – I	**Atomic structure, Periodic Table and Chemical Bonding**					**Contact Hours : 12**
1. Fundamental particles- mass and charges of electrons, protons and neutrons. 2. Bohr's model of atom and limitations. 3. Atomic number, atomic mass number isotopes and isobars. 4. Definition of orbit and orbitals, shapes of s and p orbitals only, 5. Aufbau's principle, Hund's rules. Electronic configuration of elements with atomic number (Z) = 20 only. **6.** Chemical bonding – General introduction about ionic bond & covalent bonds						**CO1**
UNIT – II	**Fuels and Lubricants**					**Contact Hours : 12**
2.1 .Definition & Classification of fuels, characteristics of good fuel. 2.2 Calorific value-higher calorific value, lower calorific value, determination of calorific value of solid or liquid fuel using Bomb calorimeter and numerical examples. Coal - types of coal and proximate analysis of coal. Gaseous fuels – chemical composition, and applications of natural gas (CNG), LPG, Lubricants: Definition properties and industrial applications						**CO2**
UNIT – III	**Water**					**Contact Hours : 08**
Hard water, types of hardness, causes of hardness, units of hardness – mg per liter (mgL^{-1}) and part per million (ppm) and simple numerical, Disadvantages caused by the use of hard water in domestic and boiler feed water. Primming and foaming and caustic embrittlement in boilers.Removal of hardness - Permutit process.						**CO3**
UNIT – IV	**Corrosion and its Control**					**Contact Hours : 08**
1. Definition of corrosion. Redox Reaction. 2. Theories of 1. Dry (chemical) corrosion- Pilling Bedworth rule 2. Wet corrosion in acidic atmosphere by hydrogen evolution mechanism						**CO4**

3. Corrosion control: 1. Metal coatings – Zn (Sherardizing), Electroplating 2. Organic coatings - use of paints, varnishes.		
UNIT – V	**Organic compound, Polymers and Plastics periods**	**Contact Hours : 08**
1. Definition of polymer, monomer and degree of polymerization 2. Brief introduction to addition and condensation polymers with suitable examples (PE, PVC, Teflon, Nylon -66 and Bakelite) 3. Thermo plastics and thermo setting plastics.		**CO 5**
Lecture Hours : 48	**Tutorials Hours :00**	**Total : 48**

Reference Books:

1*Pradeep's New Course Chemistry for class XII (Vol I and II)*
2*Modern's ABC of Chemistry Class - 12 (Part 1 & 2)*
3*Concise Inorganic Chemistry*
4*Modern Approach to Chemical Calculations*

Department:**CSE**			Programme: **Diploma**			
Semester : **II**			Course Category Code : **BS**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS223	**Applied Chemistry Lab**		**0**	**0**	**2**	**1**
Prerequisite	***At the end of this course, the students will be able to:***					
Course Outcome	**CO1**	*Total hardness of water can be estimated by titrating a sample of water with EDTA salt solution in presence of NH4Cl – NH4OH*				
	CO2	*The alkalinity of water can be determined by titrating the water sample with Sulphuric acid of known values of pH, volume and concentration.*				
	CO3	*Proximate analysis determines fixed carbon, volatile matter, moisture, and ash content, while ultimate analysis identifies the carbon, hydrogen, nitrogen, sulphur, and oxygen composition of solid fuels.*				
	CO4	*The permanent hardness of water can be removed by O' Hener's Method.*				
	CO5	*We can easily determined the flash and fire point of given lubricant oil by using Able's flash point apparatus..*				

List of experiment	
CO 1	Estimation of total hardness of water using standard EDTA solution
CO 2	Estimation of total alkalinity of given water sample by titrating it against standard sulfuric acid solution
CO 3	Proximate analysis of solid fuel)
CO 4	Estimation of temporary hardness of water sample by O' Hener's Method
CO 5	Determination of flash and fire point of given lubricating oil using Able's flash point apparatus

(Common to all Diploma Courses)						
Semester : II			Course Category Code : PC			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DECSPC201	**Fundamental of Electrical and Electronics Engineering**		**2**	**1**	**0**	**3**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Understand the meaning of basic electrical quantities such as voltage, current, power etc.*				K_2
	CO2	*Measure power and power factor in a single phase R-.L-.C. Circuit and calculation of active and reactive powers in the circuit.*				$K_{3,}$
	CO3	*Use working principle of transformer.*				K_3
	CO4	*Use basic Network Theorem and Kirchoff's laws*				K_3
	CO5	*Understand the concept of Junction Diode, transistor and field effect transistor.*				K_2,K_6

ELECTRICAL PART

UNIT – I	**Application and Advantages of Electricity**	**Contact Hours : 08**
Difference between ac and dc, various applications of electricity, advantages of electrical energy over other types of energy Definition of voltage, current, power and energy with their units, name of instruments used for measuring above quantities, connection of these instruments in an electric circuit.		**CO1**
UNIT – II	**AC Fundamentals**	**Contact Hours : 12**
Electromagnetic induction-Faraday's Laws, Lenz's Law; Fleming's rules, Principles of a.c. Circuits; Alternating emf, Definition of cycle, frequency, amplitude and time period. Instantaneous, average, r.m.s and maximum value of sinusoidal wave; form factor and Peak Factor. Concept of phase and phase difference. Concept of resistance, inductance and capacitance in simple a.c. circuit. Power factor and improvement of power factor by use of capacitors. Concept of three phase system; star and delta connections; voltage and current relationship (no derivation)		**CO2**
UNIT – III	**Transformer**	**Contact Hours : 08**
Working, principle and construction of single phase transformer, transformer ratio, emf equation, losses and efficiency, cooling of transformers, isolation transformer, CVT, auto transformer (brief idea), applications.		**CO3**
UNIT – IV	**D.C. Circuits**	**Contact Hours : 08**
Ohm/s law, resistivity, effect of temperature on resistance, heating effect of electric current, conversion of mechanical units into electrical units. Kirchoff's laws, application of Kirchoff's laws to solve, simple d.c. circuits. Thevenin's theorem, maximum power transfer theorem, Norton's theorem and superposition theorem, simple numerical problems.		**CO4**
UNIT – V	ELECTRONICS PART **Basic Electronics**	**Contact Hours : 12**
Basic idea of semiconductors – P and N type; diodes, zener diodes and their applications, Introduction to BJT : NPN and PnP transistors, other symbols and mechansim of current flow, explanation of fundamental current relations. Comparison of CB, CE and CC configuration transistor as amplifier in CE configuration. Field Effect Transistor (FET) : Construction, Operation		**CO5**

and Characteristics of Junction FET, Comparison of SFET, MOSFET & CMOS.		
Lecture Hours : 50	**Tutorials Hours :00**	**Total : 50**

Reference Books:

1. *Basic Electrical Engineering by PS Dhongal; Tata McGraw Hill Publishers, New Delhi.*
2. *A Text Book of Electrical Technology, Vol. I and II by BL Thareja; S Chand and Co., New Delhi*
3. *Basic Electricity by BR Sharma; Satya Prakashan, New Delhi*
4. *Experiments in Basic Electrical Engineering by SK Bhattacharya and KM Rastogi, New Age International Publishers Ltd., New Delhi*
5. *Electrical Machines by SK Bhattacharya; Tata McGraw Hill, New Delhi*
6. *Electronic Devices and circuits by Rama Raddy Narora Publishing House Pvt. Ltd. New Delhi.*
7. *Principles of electrical and electronics Engineering by VK Mehta; S Chand and Co. New Delhi*

Department: **Computer Science Engineering**			Programme: **Diploma**			
Semester : **II**			Course Category Code : **PC**			
Course Code	Course		Period/Week			Credit
			L	T	P	C
DCSPC221	**Fundamental Of Electrical And Electronics Engineering Lab**		**-**	**-**	**2**	**1**
Prerequisite	***At the end of this course, the students will be able to:***					
Course Outcome	**CO1**	*Understand the meaning of basic electrical quantities such as voltage, current, power etc*				
	CO2	*Measure power and power factor in a single phase R-.L-.C. Circuit and calculation of active and reactive powers in the circuit.*				
	CO3	*Use working principle of transformer.*				
	CO4	*Use basic Network Theorem and Kirchoff's laws.*				
	CO5	*Understand the concept of Junction Diode, transistor and field effect transistor.*				

LIST OF PRACTICALS

1. Identification of Resistor, Capacitor, Inductor, Transformer, LBD etc.	**CO1**
2. Measurement of wave shapes of half wave rectifier and full wave rectifier.	**CO2**
3. Use of ammeter, voltmeter, wattmeter, and multi-meter.	**CO3**
4. To draw V-I characteristics of PN junction. 5. Study of zener as a constant voltage source and to draw its V-I characteristics	**CO4**
6. Verify Theoenin and Neston theorem.	**CO5**

(Common to all Diploma Courses)						
Semester : **II**			Course Category Code : PC			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DCSPC202	**CONCEPT OF PROGRAMMING USING C**		**4**	**0**	**0**	**4**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Identify the problem and formulate an algorithm for it. Identify various control structures and implement them*				K_1,K_2
	CO2	*Identify various types of variables. Use pointer in an array and structure. Use structures and union for handling data.*				K_1,K_3
	CO3	*Explain the concepts of C programming language Explain and implement the language constructs concepts*				K_6
	CO4	*Install C software on the system and debug the program, Explain and execute member functions of C in the program.*				K_1,K_2
	CO5	*Describe and implement array concept in C program, Describe and execute pointers, Expose File System using File Handling.*				K_1,K_2,K_6
UNIT – I	**Algorithm and Program Structure**					**Contact Hours : 08**
Steps in development of a program, algorithm development, concept of flowcharts, various techniques of programming, Structured Programming, Preprocessors, Debugging, Compiling, Structure of C program, Writing and executing the first C program, Translator: Assembler, Interpreter, Compiler, I/O statement, assign statement, Keywords, constants, variables and data types, Data Type Casting						**CO1**
UNIT – II	**Control Structures and Functions**					**Contact Hours : 08**
Introduction, decision making with IF – statement, IF – Else and Nested IF, Ladder if-else, Loop: While, do-while, for, Break, Continue, goto and switch statements Introduction to functions, Global and Local Variables, Function Declaration, Function Call and Return, Types of Functions, Standard functions, Parameters and Parameter Passing, Call - by value/reference, recursive function, function with array, function with string						**CO2**
UNIT – III	**Arrays and Strings**					**Contact Hours : 08**
Introduction to Arrays, Array Declaration, Length of array, Manipulating array elements, Single and Multidimensional Array, Arrays of characters, Passing an array to function, Introduction of Strings, String declaration and definition, String Related function i.e. strlen, strcpy, strcmp						**CO3**
UNIT – IV	**Pointers**					**Contact Hours : 08**
Introduction to pointers, Static and dynamic memory allocation, Address operator and pointers, Declaring and initializing pointers, Single pointer, Pointers to an array						**CO4**
UNIT – V	**Structures and Unions**					**Contact Hours : 08**
Declaration of structures, Accessing structure members, Structure Initialization, array of structure variable, Pointer to a structures, Union, Declaration of Union, Basics of File Handling, opening and closing of File, reading and writing character from a file						**CO5**
Lecture Hours : 30		**Tutorials Hours :10**				**Total : 40**

Reference Books:

1. Let us C by Yashwant Kanetkar
2. Programming in ANSI C by E Balaguruswami, , Tata McGraw Hill Education Pvt Ltd ,New Delhi
3. Programming in C by Reema Thareja; Oxford University Press, New Delhi

4. Programming in C by Gottfried, Schaum Series, , Tata McGraw Hill Education Pvt Ltd , New Delhi

Department:**Computer Science and Engineering**			Program:**Diploma**			
Semester : **II**			Course Category Code : **PC**			
Course Code	Course		Period/Week			Credit
			L	T	P	C
DCSPC222	**CONCEPT OF PROGRAMMING USING C LAB**		**-**	**-**	**2**	**1**
Prerequisite	***At the end of this course, the students will be able to:***					
Course Outcome	**CO1**	*Identify the problem and formulate an algorithm for it.Identify various control structures and implement them*				
	CO2	*Identify various types of variables. Use pointer in an array and structure. Use structures and union for handling data.*				
	CO3	*Explain the concepts of C programming language Explain and implement the language constructs concepts*				
	CO4	*Install C software on the system and debug the program, Explain and execute member functions of C in the program.*				
	CO5	*Describe and implement array concept in C program, Describe and execute pointers, Expose File System using File Handling.*				

PROBLEM SOLVING USING C

1. Programming exercises on executing and editing a C program. 2. Programming exercises on defining variables and assigning values to variables. 3. Programming exercises on arithmetic, logical and relational operators.	**CO1**
4. Programming exercises on arithmetic expressions and their evaluation. 5. Programming exercises on formatting input/output using printf and scanf and their return type values. 6. Programming exercises using if statement. 7. Programming exercises using if – Else.	**CO2**
8. Programming exercises on switch statement. 9. Programming exercises on while and do – while statement. 10. Programming exercises on for – statement.	**CO3**
11. Simple programs using functions and recursive function. 12. Programs on one-dimensional array. 13. Programs on two-dimensional array. 14. Programs for concatenation two strings together. 15. Programs for comparing two strings.	**CO4**
16. Simple programs using pointers. 17. Simple programs using structures. 18. Simple programs using union.	**CO5**

(Common to all Diploma Courses)						
Semester : **II**			**Course Category Code : PC**			
Course Code	Course		Period / Week			Credit
			L	T	P	C
DCSPC224	**OFFICE AUTOMATION TOOL LAB**		**0**	**0**	**4**	**2**
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Use file mangers, word processors, spreadsheets, presentation software's*				K_1,K_3
	CO2	*Describe the features and functions of the categories of application software.*				K_1,K_2
	CO3	*Present conclusions effectively, orally and in writing.*				K_2,K_3
	CO4	*Understand the dynamics of an office environment.*				K_2
	CO5	*Demonstrate the ability to apply application software in an office environment. Use Google Suite for office data management tasks.*				K_3
UNIT – I	**Word Processing**					**Contact Hours : 08**
MS Word concepts : Creating, saving, closing, Opening an existing document, Using Featured Word Templates, Exploring Template and Formation of Documents, Selecting text, Editing text, Finding and replacing text, Character and Paragraph Formatting, Automatic Formatting And Styles, Inserting and removing page breaks, Header and footers, Page No, Border & Shading, Change Case, Checking Spelling, Working With Tables, Insert Table, Delete Cells, Merge Cell, Graphics And Frames , Page Design and Layout, Creating and Printing Merged Documents, Encrypting document with a password, Printing documents						**CO1**
UNIT – II	**Spread Sheet**					**Contact Hours : 08**
MS Excel Concept: Creating, Saving, closing, Editing a Workbook, Inserting, Deleting Work Sheets, entering data in a cell, Copying and Moving from selected cells, entering formula, handling operators in Formula, Functions: Mathematical, Logical, statistical, text, financial, Date and Time functions, Using Function Wizard. Formatting a Worksheet: Formatting Cells – changing data alignment, changing date, number, character or currency format, changing font, adding borders and colors, Printing worksheets, Charts and Graphs – Creating, Previewing, Modifying Charts, LOOKUP/VLOOKUP						**CO2**
UNIT – III	**Presentation**					**Contact Hours : 08**
MS Power Point Concept : Creating, Opening and Saving Presentations, Working in Different Views, Working with Slides, Adding and Formatting Text, Formatting Paragraphs, Checking Spelling and Correcting Typing Mistakes, Making Notes Pages and Handouts, Drawing and Working with Objects, Adding Clip Art and other pictures, Designing Slide Shows using templates, Rehearse timing, Narration, Multimedia effects- Apply Transitions between Slides, Animate Slide Content, Set Timing for Transitions and Animations, Insert and Format Media, Encrypting presentations with a password, Running and Controlling a Slide Show, Printing Presentations						**CO3**
UNIT – IV	**Database**					**Contact Hours : 08**
MS Access Concepts: Database, Relational Database, Integrity. Operations: Creating, dropping, manipulating table structure. Manipulation of Data: Query, Data Entry Form, Reports						**CO4**
UNIT – V	**Google Office Tools**					**Contact Hours : 08**
Creating , saving , downloading , sharing files/folders from Google drive, creating and sharing Google docs, import and export docs, creating and sharing Google sheet, import and export Google sheet, Google forms and form responses ,creating Google slides to present your ideas						**CO5**
Lecture Hours : 30		**Tutorials Hours :10**				**Total : 40**

Reference Books:

1. Microsoft Office 2010 For Dummies By Wallace Wang
2. 2007 Microsoft Office System Plain & Simple by Jerry Joyce Microsoft Press
3. Office XP : The Complete Reference- Stephen L. Selson - Tata McGraw Hill Education.
4. Working in Microsoft Office - Richard Mansfield - Tata McGraw Hill Education.