Course Descriptions for first semester of Bachelor of Science (B. Sc.) in Computer Science programme for students of 2023-27 batch

Introduction to Programming Using C (22B21MA111)

Introduction to Programming Using C will cover Introduction, Data types, Operators, and Control Flow, Array, Functions, Structures and Union, Pointers and File Handling.

Course (Code	22B21	Session 2	023-24					
C	T	T 4 I		•	T T	Month	a from	Jul 2023	to Dec 2023
Course N	ame	Introd	luction to P	rogrammi	ng Usin	<u>g C</u>	200		
Credits		3			Conta Hours	ct	3-0-0		
		Coore	linator(s)				•		
		Teach	er(s)						
		(Alpha	abetically)						
COURSI student w	E OUTCO vill be able	DMES: to	After the su	accessful co	ompletio	n of this	s cours	e, the	COGNITIVE LEVELS
CO1	explain v	various o	data types, r	nemory allo	ocation	schemes	s, prec	edence of	Understand
001	arithmeti	ical and	logical oper	ations, and	need of	array, a	nd stru	uctures	Level (C2)
CO2	explain	the flow	v chart and	l write the	high-le	evel cod	le for	different	Understand
	problems	<mark>S</mark>							Level (C2)
CO3	apply an	d imple	ment functi	<mark>ons with o</mark>	r withou	it pointe	ers for	different	Apply Level
<u> </u>	apply a	<mark>s</mark> nd imn	lement var	ious operat	tions li	ke trav	erse	insertion	(C3) Apply Level
C04	deletion	etc on	files	(C3)					
Module	Title of 1	the	Topics in	the Module	p.				No. of
No.	Module	une	1 opics in	ine moudi	C				Lectures
1.	Introduc	tion	Introductio	on to Logic	buildin	g, Step l	by ster	o solution	9
			to simple problems, developing logic/flow-						
			chart/pseudo code to solve problems like						
			simple/log	ical games,	puzzles	•			
2.	Data typ	es,	Data, varia	ables and co	onstants,	data ty	pes, oj	perators –	9
	Operator	s, and	binary, u	unary, ter	nary,	operato	r pr	ecedence,	
	Control	Flow	operations	using diffe	rent ope	rators, i	f, if-el	se, while,	
2	A	do-while, for, switch-case in C Programming				$g_{1D/2D}$	6		
3.	Array		Fundamen	tals of Arra	y, Imple	iko inco	on or rtion	ID/2D	0
			undation e	etc in C pro	oramm	ing usin	o diffe	rent	
			problems	cie. In e pre	-grannin	ing usin	5 41110	Tent	
4.	Functio	ns	Introductio	on to Functi	ation in	4			
			C program	ming langu	age, Fu	nctions	using l	Pass by	
		value, recursive functions						-	
5.	Structur	res	Introductio	on and imp	lementa	tion of	Struct	ures and	4
	and		Union in	C programr	ning, A	rray of	Struct	ures and	
	Union		related ope	erations like	e insertio	on, trave	ersal, u	pdation,	
			etc. in C	programmi	ng usir	ig diffe	rent p	roblems,	
	D		Function u	Ising structu	ires	11		c	
6.	Pointere	3	Pointers in	Vnam	ic memo	ory alloc	ation t	or	6

		1D/2D array and structures, Arithmetical operations	
		on pointers, functions using pass by reference	
7.	File Handling	Introduction to File, creation of files in C	4
		programming language, Modes of File Handling	
		like read, write, update; different types of files like	
		binary file and text file and respective operations	
		like, opening, closing, reading, writing, end of file.	
		Total Number of Lectures	42
Evaluat	ion Criteria		
Compor	ients	Maximum Marks	
T1		20	
T2		20	
End Sem	ester Examination	35	
TA		25 (Quiz, Assignments)	
Total		100	
Project	based learning: E	ach student in a group of 4-5 will apply the concepts of (C
program	ming to solve pract	tical problems.	1.1.
Recomn	nended Reading n	naterial: Author(s), Title, Edition, Publisher, Year of Pu	iblication etc.
(Text bo	oks, Reference Bo	oks, Journals, Reports, Websites etc)	
Text Bo	oks		
1	H. Schildt. "The C	Complete Reference C", 4th Edition, TMH, 2000	
2	A. N. Kamthane, 2006	"Programming with ANSI and Turbo C", Pearson Ed	ucation, Delhi,
3	H. Cooper, H. Mu	llish, "Spirit of C", 4th Edition, Jaico Publishing House,	2006
4	G. Perry, D. Mille	r, "C Programming Absolute Beginner's Guide Paperba	ack", QUE; 3 rd
	edition, 2013		
5	Y. Kanetkar, "Let	: Us C: Authentic Guide to C Programming Language	e" 17 th edition,
	BPB publisher, 20	20.	
Referen	ce Books		
1	D. Griffiths, D. Gr	iffiths, "Head First C: A Brain-Friendly Guide", O'Reil	ly Media, Inc.,
	2012.		
2	B. W. Kernighan	, D. M. Ritchie, "The C Programming Language",	, 2nd Edition,
	Prentice-Hall India	a, New Delhi, 2002	
3	B. A. Forouzan, R	. F. Gilberg "Computer Science: A Structured Programm	ning Approach
	Using C", 2 nd Edi	tion, Thomson Press, New Delhi, 2006	
CO.PO.	PSO Manning		

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	3	2	1	1	1		2	1	2	3	3	3
CO2	3	2	2	3	1		3	1	2	3	3	3
CO3	3	2	2	2	1		2	1	2	2	2	2
CO4	3	2	2	2	1		3	1	2	3	3	3
Avg	3	2	2	2	1		3	1	2	3	3	3

Introduction to Programming Using C LAB (22B25MA111)

Introduction to Programming Using C Lab will cover Introduction, Data types, Operators, and Control Flow, Array, Functions, Structures and Union, Pointers and File Handling

Course Coo	le 22B25MA1	11	Semester: O	dd	Semest	ter I	Session 2	023-24	
					Month	from	1 Jul 2023 t	o Dec 2023	
Course Na	ne Introductio	n to P	rogramming	Using C	LAB				
Credits	2			-4					
Faculty	Coordinate	or(s)							
(Names)	Teacher(s) (Alphabetic)	cally							
COURSE (DUTCOMES: A	fter th	e successful c	ompletion	of this	cours	e, the	COGNITIV	
	develop program	ns/log	ic for data ty	mes expr	essions	and c	onditional	E LEVELS	
	structure.	102	ie for data ty	pes, expr	05510115		onunionui	(C3)	
CO2	develop progran	evelop programs for array and functions.							
CO3	develop progran	evelop programs for structure and union.							
CO4	develop prograi	develop programs of pointers and recursive functions.							
CO5	construct menu	driven	programs to p	perform ba	asic file	opera	tions.	Apply Level (C3)	
Module No.	Title of the Modul e	Lis	t of Experime	ents				No of Labs	
1.	Introduction	Intro solut logic like Code	oduction to l tion to si c/flow- chart/ simple/logical e block (Edito	Logic bu mple p pseudocoo games, p r for C)	ilding, roblems de to s ouzzles.	Step , de olve Introc	by step eveloping problems luction to	4	
2.	Data types, Operator s, and Control Flow	Data – b oper whil Prog	, variables and inary, unary, ations using e, do-while gramming	d constant ternary, different , for,	s, data t operato operato switch-	ypes, or pro- ors, if -case	operators ecedence, f, if-else, in C	4	
3.	Array	Fund Arra trave pro	damentals of A y and related ersal, updation gramming using	Array, Imp operations , etc. in C ng differen	lementa i like ins nt proble	tion c ertior ems	f 1D/2D I,	4	

4.	Functions	Introduction to Functions and its implementation in \overline{C}	4						
		C							
		programming language, Functions using Pass by							
5	Structuro	Introduction and implementation of Structures and	1						
5.	s and	Union in C programming Array of Structures and	4						
	Union	related operations like insertion traversal							
	Childh	updation etc in C programming using different							
		problems. Structures using function							
6.	Pointers	Pointers in C, Dynamic memory allocation for	4						
		1D/2D array and structures, Arithmetical operations							
		on pointers, functions using pass by reference							
7.	File Handling	Introduction to File, creation of files in C	4						
		programming language, Modes of File Handling							
		like read, write, update; different types of files like							
		binary file and text file and respective operations							
		like, opening, closing, reading, writing, end of file.							
		Total No. of Labs	28						
Evaluation	n Criteria								
Compone	nts	Maximum Marks							
Lab Test -	1	20							
Lab Test -	2	20							
Day to Da	y 1 15 Evolution	00 2 15 Mini Project 15 Attendence 15)							
(Evaluation	1 1- 15, Evaluation	2- 15, Mini Project- 15, Attendance- 15)							
Project ba	sed learning. Fac	h student in a group of 3-4 will develop a mini project y	with the help						
of various	concepts of C prog	ramming. In a team they will learn how to apply the co	ncepts for						
problem so	olving in a meaning	tful way.							
Recommen	nded Reading ma	terial: Author(s), Title, Edition, Publisher, Year of Pub	lication etc.						
(Text book	s, Reference Book	s, Journals, Reports, Websites etc)							
Text Book	KS								
1	H. Schildt. "The C	Complete Reference C", 4th Edition, TMH, 2000							
2	A. N. Kamthane,	"Programming with ANSI and Turbo C", Pearson Edu	acation, Delhi,						
	2006								
3	H. Cooper, H. Mu	llish, "Spirit of C", 4th Edition, Jaico Publishing House	2, 2006						
4	G. Perry, D. Mill 3 rd edition, 2013	er, "C Programming Absolute Beginner's Guide Pape	rback", QUE;						
5	Y. Kanetkar, "Let BPB publisher 20	t Us C: Authentic Guide to C Programming Language	" 17 th edition,						
Reference	BID publisher, 20	20.							
1	D. Griffiths, D. Griffiths, "Head First C: A Brain-Friendly Guide", O'Reilly Media,								
	Inc., 2012.								
2	B. W. Kernighan, D. M. Ritchie, "The C Programming Language", 2nd Edition.								
	Prentice-Hall Indi	a, New Delhi, 2002	,						
3	B. A. Forouzan,	R. F. Gilberg "Computer Science: A Structured	Programming						
	Approach Using C	C", 2nd Edition, Thomson Press, New Delhi, 2006	-						

СО	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	3	2	1	1	1		2	1	2	3	3	3
CO2	3	2	1	1	1		2	1	2	3	3	3
CO3	3	2	2	2	1		2	1	2	3	3	3
CO4	3	2	2	2	1		3	1	2	3	3	3
CO5	3	2	3	2	1		3	1	2	3	3	3
Avg	3	2	2	2	1		3	1	2	3	3	3

Discrete Mathematical Structures (22B21MA113)

Set theory, basic operations on sets, Venn diagram, relations, Hasse diagram, lattices, boolean algebra, numeric functions, generating functions, recursive functions, solution of recurrence relations of constant coefficients, predicate and propositional calculus, graphs, subgraphs, isomorphism of graphs, Eulerian and Hamiltonian graph, graph coloring, minimum spanning tree, digraphs, adjacency matrix, incidence matrix, path matrix, groups, rings, fields.

Course C	ode 22B2	1MA113	Semester Od	d	Semest Month	er I Session from Jul 2023	2023-24 to Dec 2023				
Course N	ame Discr	ete Mathema	tical Structure	es							
Credits	4			Contact]	Hours	3-1-0					
Faculty	Coor	rdinator(s)									
(Names)	Teach (Alph	her(s) nabetically)									
COURSE will be abl	OUTCOME e to	S: After the s	uccessful comp	letion of t	his cours	e, the student	COGNITIVE LEVELS				
CO1	explain partia		Understand Level (C2)								
CO2	explain lattic relations of c	es and Boolea	n algebra and s cients.	olve the p	roblem o	f recurrence	Apply Level (C3)				
CO3	explain the p arguments.	propositional a	nd predicate cal	culus to cl	heck the	validity of	Understand Level (C2)				
CO4	demonstrate problems of	lemonstrate graphs, digraphs, trees and use it to solve the different problems of graph theory.									
CO5	illustrate var	Understand Level (C2)									
Module	Title of the	Торіс	s in the Modul		No. of						
No.	Module						Lectures				
1.	Set theory an	nd Basic	concept of set	theory, op	erations	on sets, Venn	10				

		Relations	diagram, relations and their composition, pictorial						
			representation, matrix and graphical representations,						
			equivalence relations and partitions, closure of						
			relation, Warshall's algorithm for transitive closure,						
			partial ordered relations and POSE1, Hasse diagram,						
2		Lattiana Doolaan	Different types of lattices isomorphic lattices						
2.		Algebra and	Boolean algebra discrete numeric functions						
		Numeric	asymptotic behavior of numeric functions generating						
		Functions	functions, solution of recurrence relations by	12					
			generating function. recursive functions.						
			homogenous and particular solution of recurrence						
			relations of constant coefficients.						
3.		Predicate and	Propositions- simple and compound, basic logical						
		Propositional	operators and their truth tables, tautologies and						
	Calculus contradictions, validity of arguments. Normal forms: 7								
			disjunctive and conjunctive normal forms, Predicates						
			and quantifiers, logical equivalence.						
4.		Graphs	Graphs and related definitions, subgraphs,						
			isomorphism, paths and connectivity, Eulerian graph						
	minimum spanning tree (Prim's algorithm), graph								
	colorings, digraphs, adjacency matrix, incidence								
	matrix, path matrix								
5.		Algebraic	Groups- definitions and examples, order of elements,						
		Structures	subgroup, cyclic group, rings and fields.	4					
			Total number of Lectures	42					
Eval	uatio	n Criteria							
Com	pone	nts	Maximum Marks						
T1			20						
T2	C	· • · ·	20						
	Semes	ster Examination	33 25 (Ouiz Assignments Tutorials)						
IA Tota	1		25 (Quiz, Assignments, Tutoriais)						
Proj	via 100 oject based learning: A group of 4 to 5 students will be formed. Each group will have a group								
leade	der to develop coordination among the group members. Each group will be assigned a problem								
relat	ated to the diversified applications of graph theory. The group leader of each group will submit a								
repo	port of 6-7 pages and then finally each member of the group will be evaluated through a viva voce.								
Reco	ecommended Reading material: Author(s), Title, Edition, Publisher, Year of Publication etc.								
(Tex	Text books, Reference Books, Journals, Reports, Websites etc)								
1.	S. Li	pschutz, M.L. Lipson	n, and V.H. Patil, Discrete Mathematics, Revised 3 rd Edi	tion, McGraw-					
	Hill	Education, 2017.							
2.	K.H. Rosen, Discrete Mathematics and its Application, 7 th Edition, Tata McGraw-Hill, 2011.								
3.	C. L. $4^{th} Ec$	Liu, D. Mahapatra, dition, McGraw-Hill	, 2017.	ed Approach,					
4.	B. Kolman, R.C. Busby, and S. Ross, Discrete Mathematical Structures, 6 th Edition, Pearson Education India, 2015.								
5.	N. D	eo, Graph Theory. P	rentice Hall of India, 1980.						
3. 4.	 C. L. Liu, D. Mahapatra, Elements of Discrete Mathematics: A Computer Oriented Approach, 4th Edition, McGraw-Hill, 2017. B. Kolman, R.C. Busby, and S. Ross, Discrete Mathematical Structures, 6th Edition, Pearson 								
5.	N. Deo, Graph Theory, Prentice Hall of India, 1980.								

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	2	2	2	1	1		1	2	2	1	1	1
CO2	2	2	2	1	1		1	1	2	2	1	2
CO3	1	2	1	1	1		1	1	1	1	1	1
CO4	3	2	2	2	1		2	1	2	2	2	2
CO5	2	1	2	2	1		2	1	2	2	2	2
Avg	2	2	2	2	1		2	2	2	2	2	2

Optics and Electromagnetism (23B21PH111)

Interference, Diffraction and Polarization of Light, Gauss's Law and applications, Laplace and Poisson's Equations, Maxwell's Equations, Electromagnetic Waves, Poynting's theorem and Poynting vector, Propagation of Electromagnetic waves in Free Space, Transverse nature of EM waves, Energy and momentum in EM waves, Lasers, Principles and working of lasers, three level Laser Scheme, Ruby laser, Applications of lasers Optical Fiber, working principle, applications of fiber.

Course Co	ode 23B21I	PH111	Semester Odd		Semester I Session 2023-24				
					Month	from Jul 20	23 to Dec 2023		
Course Na	ame Optics	and Electro	omagnetism						
Credits	3			Contact	Hours	3-0-0			
Faculty	Coord	inator(s)							
(Names)	Teache	er(s)							
	(Alpha	betically)							
COURSE	OUTCOMES:	After the s	successful compl	etion of t	his cours	e, the	COGNITIV		
student wi	ll be able to		E LEVELS						
CO1	recall the basic p	recall the basic principles of physics related to optics, electromagnetic theory,							
	laser and fiber o	ptics.					Level (C1)		
CO2	illustrate the var	ious physical	l phenomena with	interpreta	tion based	l on the	Understand		
	mathematical ex	pressions inv	volved.				Level (C2)		
CO3	apply the concept	pply the concepts/principles to solve the problems related to wave nature of							
	light, electromag	ight, electromagnetic theory, laser and optical fiber.							
CO4	analyze and example	analyze and examine the solution of the problems using physical							
	and mathematic	d mathematical concepts involved.							
Module	Title of the	Topics	in the Module				No. of		
No.	Module						Lectures		

1	Physical Optics	Interference: Introduction to wave nature analytical	17
1.	i nysieur opries	treatment of interference, Intensity distribution of fringe	1,
		system, Fresnel's Bi-prism, interference by thin films,	
		Newton's rings.	
		Diffraction: Introduction, Diffraction (limited to	
		Fraunhofer class) from Single slit, double slit and	
		Diffraction grating.	
		Polarization: Introduction to polarization, Brewster's law,	
		Malus law, Birefringence, Principles of use of uni-axial	
		plates Optical activity	
2	-	Introduction of electromagnetism Basic idea of	
2.		Cartesian Spherical polar and cylindrical coordinate	
		systems Basics of fields Gradient Divergence and	
		Curl Coulomb's law Electric Flux & Gauss's law	15
		Applications of Gauss law for Spherical and	10
		Cylindrical symmetries (all important cases)	
	Electromagnetic	conductors. Force per unit area on the surface of the	
	Theory	charged conductor. Laplace and Poisson's equations.	
		Maxwell's correction to Ampere's law, Displacement	
		current, Maxwell's equations in free space and	
		dielectric media, Poynting's theorem (derivation) and	
		Poynting vector, Electromagnetic waves in free space	
		(equations and solutions) and Transverse nature of	
		EM waves, Energy and momentum in EM waves.	
3.		Introduction to Laser, spontaneous and stimulated	
		emission, population inversion, Einstein A and B	
	Lasers	coefficients, Principles and working of lasers, Three	4
		level Laser Scheme, Ruby laser, Applications of	
		lasers	
4.		Concept of optical fiber and Principle of Total	
		Internal Reflection in optical fiber, Numerical	
	Optical Fiber	aperture and Single, multistep & graded index fiber,	4
		Attenuation coefficient, Transmission losses in	
		optical fiber, Applications of an optical fiber.	
		Total number of Lectures	40
Evaluatio	on Criteria		
Compone	ents	Maximum Marks	
		20	
12 End Sama	stan Eugenin stion	20	
	ester Examination	55 25 (Quiz Assignments Tutorials)	
Total		25 (Quiz, Assignments, Tutoriais)	
Project h	acad loarning. The	students will be given small projects (in groups) on ver	ious topics like
Interferen	ce diffraction pol	larization electromagnetism laser and optical fiber to	explore their
applicatio	ns in advanced tech	inclose to understand the role of physics. This will help	the students to
connect th	e concept studied	in the class with their application in technology and wil	l enhance their
analytical	skills.	in the class with their uppreduction in technology and with	r eminiee men
D			

Recommended Reading material: Author(s), Title, Edition, Publisher, Year of Publication etc. (Text books, Reference Books, Journals, Reports, Websites etc)

1.	A. K. Ghatak, Optics, Tata McGraw Hill.
2.	E. Hecht, Optics, Pearson Education.
3.	F. A. Jenkins, H. E. White, Fundamentals of optics, Tata McGraw Hill.
4.	D. J. Griffiths, Introduction to Electrodynamics, Prentice-Hall India.
5.	G. Keiser, Optical Fiber Communications, Tata Mc Graw Hill Education.

ENGLISH (22B28HS111)

English as a Communication Tool: Basic aspects of English: LSRW: Listening, Speaking, Reading, Writing. Non-Verbal Communication, Presentation Techniques, Gambits, Phonetics, Grammar, Vocabulary Enrichment techniques, Error Analysis. Literary & Rhetorical Devices, Textual Organization: Letter Writing, Email Etiquettes, Feedbacks and Review Writing· Notice, Agenda and Minutes· Format of Report Writing· CV and Resume.

Course Co	ode	22B28HS11	1	Semester Od	d	Semest Month	ter I Sessior from Jul 2023	a 2023-24 B to Dec 2023
Course N	ame	English						
Credits		2			Contact]	Hours	1-0-2	
Faculty		Coordinate	or(s)					
(Names)		Teacher(s)						
		(Alphabetic	cally)					1.
COURSE will be abl	OUTC le to	COMES: Aft	er the s	uccessful comp	oletion of t	his cours	se, the student	COGNITIVE LEVELS
CO1	develo comm	p an understan unication tool.	ding and	appreciate the l	basic aspect	s of Engl	ish as a	Understand Level (C2)
CO2	apply g writter	grammar conce communicatio	epts and	vocabulary skill	s in present	ation and	in spoken and	Apply Level (C3)
CO3	identify and explain different literary and rhetorical devices used in discourse.							Analyze Level (C4)
CO4	<mark>compo</mark>	se different for	rms of p	rofessional writi	Create Level (C6)			
CO5	apply	Phonetics throu	igh theo	ory and practice for better pronunciation.			Apply Level (C3)	
Module No.	Title o Modu	of the lle	Topic	s in the Modu	e			No. of Lectures
1.	Englis Comn Tool	sh as a nunication	Comm Listen Comm Gamb	nunication, Bas ing/ Speaking, nunication, P its for Interview	sic aspects Reading/ resentation vs	s of Eng Writing n Tecl	glish: LSRW: g, Non-Verbal nniques and	6
2.	Langu Litera	age and ry devices	Phone Litera	tics: Pronuncia	tion, Stress al Devices	s, Rhyth S	<mark>m, Intonation,</mark>	2
3.	Profes Applie ng	ssional cation/Writi	Letter Notice Writin	Writing, Ema e, Agenda and ng, CV and Res	ul Etiquet d Minutes ume	tes, Rey s, Form	view Writing, at of Report	3
4.	Gram	mar &	Parts	of Speech an	nd Agreen	ment of	Noun-Verb,	3

	Vocabulary	Tense, Aspect, Mood and Voice, Vocabulary Enrichment techniques, Synonyms, Antonyms,	
		Homonyms, Homophones, Collocation	
		Total number of Lectures	14
Module No.	Title of the Module	List of Experiments	No. of Lectures
1	Interpersonal Oral Communication through self- Introduction	Interpersonal Communication; Learning the Impact of Perception on Interpersonal Communication	2
2	Confident Non- Verbal Behaviour	To be able to impart good body language and learn aspects of non-verbal behaviour	2
3	Basics of Formal Presentations	PPT Presentation; Reading Newspapers, comprehending and presenting in own words with confidence & assertiveness	2
4	Listening through Language Lab Software (SKY IELTS)	Active Listening; Academic Listening; Listening to Debates and Presentations; Note-taking Techniques; comprehending through lab software	2
5	Phonetics and Pronunciation through lab (SKY Pronounce)	Phonetics; Speaking	2
6	Reading Practice & Comprehension through SKY Read Up Speed Up Software	Purpose, Process, Methodologies; Skimming and Scanning; Levels of Reading; Reading Comprehension; Academic Reading Tips	2
7	Grammar for Professional Writing Requirements: Parts of Speech; Tense, Voice, Types of Sentences; Vocabulary Enhancement	Passage Comprehension; Jumbled Paragraphs for grammar learning; Summary/Inference of short paragraph; Picking the Out of Context sentence in a Jumbled Paragraph; Email Writing etiquettes; Nature and Style of sensible Writing: Describing, Defining, Classifying, providing examples or evidence,Writing introduction and conclusion	2
		Total No. of Labs	14
Evaluatio Compone Mid Term End Seme TA Total	on Criteria ents ster Examination	Maximum Marks 30 (Lab Exam) 40 30 (Quiz, Assignments, Tutorials) 100	

PBL Component: The creative writing project is to be done in a group of 3-4 students. Students will
be asked to choose one specific word that impacts all six dimensions of their life-mental, physical,
emotional, relational, spiritual and financial and create a project based on that.
Recommended Reading material: Author(s), Title, Edition, Publisher, Year of Publication etc.
(Text books, Reference Books, Journals, Reports, Websites etc)
1. C.L. Bovee, J.V.Thill, and M.Chaturvedi, <i>Business Communication Today</i> ,9 th Ed, Pearson
Education, copyright@ Dorling Kinderslay (India) Pvt Ltd,2009
K. M. Quintanilla and S.T.Wahl, Business and Professional Communication, Sage Publications
2. Pvt India Ltd,2011
3. S. Kumar, P. Lata, <i>Communication Skills</i> , Oxford University Press,1 st , Ed. 2011
4. R.K Bansal, J.B Harrison, Spoken English for India, Orient Longman, 2018
5. M A Yadugiri, The Pronunciation of English: Principles and Practice, Viva Books Pvt. Ltd,
India, 2015
6. A. R. Rizvi, Effective Technical Communication, 2nd edition, McGraw Hill Education Private
Limited, Chennai, 2018.
7. R. Murphy, English Grammar in Use, 4 th edition, Cambridge University Press, 2012.
8. M. Hewings, <i>English Pronunciation in Use</i> . Advanced. Cambridge: CUP, 2009
9. K. Mohan, N. P. Singh, <i>Speaking English Effectively</i> 2nd Edition. Macmillan Publishers India
Ltd. Delhi. 2011
10. E. S. Kumar, P. Sreehari, A Handbook for English Language Laboratories. New Delhi:
Foundation, 2009.
CO-PO-PSO Mapping:

CO **PO1** PO2 PO3 **PO4** PO5 PO6 **PO7 PO8 PO9 PSO-CS PSO-IT PSO-CP** CO1 3 2 1 3 2 **CO2** CO3 3 2 **CO4** 1 3 2 **CO5** 3 1 3 2 Avg

Life Skills and Effective Communication (22B12HS111)

Overview of Life Skills, Life Skills for Self, Family, Society and lifelong success. Advanced Reading and Comprehension Skills, inferring lexical and contextual meaning, employing discourse analysis, Advanced Speaking Skills, Advanced Writing skills. Team- work skills, Empathy, Emotional Intelligence, VUCA Leadership, Resilience, Tolerance, Self-Belief and Time Management. Presentation and Interaction Skills: Speech Delivery, Group Discussion, Presentation Skills, Public Speaking, Audience Analysis, Interviews, Assessment of Personality. Creativity: Definition; Characteristics of Creative Person: Fluency; Originality; Curiosity; Critical Thinking, Problem Solving Techniques. Harmony in personal and social life, Concept of personal and group Ethics; Balance between - rights and duties-welfare of self and welfare of all.

Understanding Nine universal values in relationships. Character, Righteousness and Virtues for A Meaningful Life: Self-Realization Through Spiritual texts.

Course	Descri	iption
Course	Deser	puon

Course Code		22B12	HS111	Semes	ster:	Sem	ester I Session 202	3-24	
				Odd		Mon	th from July 2023	–Dec 20)23
Course N	ame	Life S	kills and Effe	ective C	Commu	nicati	on		
Credits		3			Conta	oct	2-0-2		
		Coord	dinatar(a)		Hours	5			
		Teach	er(s)						
		(Alpha	abetically)						
COURSE student wi	OUTCO ill be able	DMES: to	After the suc	cessful	comple	tion o	f this course, the	CC LF	OGNITIVE EVELS
CO1	explain lifelong	differer success	nt life skills	require	ed for	Self,	Family, Society a	nd Un Le	derstand vel (C2)
CO2	apply li environi	stening, nent.	speaking, re	eading	and wr	iting	skills in professio	nal Ap	ply Level 3)
CO3	examine work-place skills for personal and professional excellence.							An (C4	alyze Level 4)
CO4	evaluate	and ma	ake decisions	ons for empowerment of self and others.					aluate Level 5)
Module	Title of	the	Topics in th	ne Mod	ule				No. of
No.	Module			<u></u>	1.11 1	<u>л</u> .	1 ' ' C'	6	Lectures
1.	Introdu	ction	Overview of Life Skills: Meaning and significance of life skills Life skills identified by various						3
			organization	is, Life	Skills fo	or Self	f, Family, Society a	nd	
			lifelong success.						
2.	Advanc	ed	Advanced	Readin	g and	Co	mprehension Ski	ls,	5
	LSRW	Skills	inferring lex	xical an	id conte	extual	meaning, employ	ng	
			discourse	analysis	s, Adv	anceo	l Speaking Ski	ls:	
			Negotiation	Skills	Expres	sing (Opinions Agreem	ent	
			and Disag	reemen	t, Adv	anceo/	l Listening Ski	ls,	
			Advanced V	Writing	skills:	The	art of Condensati	on,	
			Note making	g, Essay	Writin	g.			
			Interpersona	l Skill	s: Tear	n-w	ork skills, Empat	ıy,	3
			Resilience	Toler	ngence,	v Self_	UCA Leauersi Belief and Ti	ip, ne	
			Managemen	t	ance,	Sell-	Dener and Th	IIC .	
	Work D		Presentation	and In	teractio	n Ski	lls: Speech Delive	ry,	4
3.	Skills	lace	Group Disc	ussion,	Presen	tation	Skills (Focused a	nd	
	N and a lot		targeted info	ormation	n seekir	ng and	presentation), Pul	lic	
			Speaking, A	udience	e Analy	sis, In 8 Sali	terviews, Assessm	ent	
			Building Sa	iy - Pro elf-Cont	fidence	- F	nhancing Persona	s - itv	
			Skills.			Ľ			

		Creat Defin Fluen Probl	ivity and Critical Thinking: Creativity: 4 ition; Characteristics of Creative Person: icy; Originality; Curiosity; Critical Thinking, em Solving Techniques: Six Thinking Hats,				
		Mind	Mapping etc.				
4.	Ethie Holis	Harm Integ Relat Balar and value Fami Respo relation stic Life Socie (Sarv famil Chara Mean texts: Truth Sense Mait	iony in personal and social life: Professional5iony in personal and social life: Professional5rity, Respect & Equality, Building Trusting5ionships. Concept of personal and group Ethics;5ice between - rights and duties-welfare of self6welfare of all. Understanding Nine universal5s in relationships. Understanding harmony in thely. Harmony in the Family; Trust (Vishwas) andect (Samman) as the foundational values ofonship. Understanding the harmony in the societyety being an extension of family): Undividedety (AkhandSamaj), Universal Orderabhaum Vyawastha)- from family to worldy. Gender Harmony & equity.acter, Righteousness and Virtues for Aingful Life: Self-Realization Through SpiritualEgoless, Humility, Righteousness, Purity,fulness, Integrity, Self-restraint, Self-control,e of responsibility, Empathy, Love, Compassion,ci / Comradeship, Cooperation, Tolerance and				
		Grati	tude.				
	•		Total Number of Lectures 2	8			
		LIFE SKILLS	S AND EFFECTIVE COMMUNICATION LAB				
Experi	ment	Title of the Module	List of Experiments				
1.	•	Introduction	Tell Me About Yourself & Elevator Pitch				
2.		Introduction	Personal Effectiveness and Who Am I activity	CO1			
3.		Advanced	Academic Listening	CO2			
4.		I SRW Skills	Reading	CO2			
5.			Essay Writing	CO2			
6.	6.		Group Discussions-1	CO3			
7.			Group Discussions-2	CO3			
8. Work-P		Work-Place	Technical Presentations-1	<u>CO3</u>			
9.	9. Skills		1 ecnnical Presentations-2	CO3			
10	•		United Ininking and Creativity	CO3			
11	•	Ethics and Holistic Life	TED Talk analysis of Social, Health and Cultural analysis	CO4			
13	•	Honsue Ene	TED Talk analysis of Social, Health and Cultural analysis				
14	•		Self-Realization Through Spiritual texts				

Evalu	ation Criteria				
Com	ponents	Maximum Marks			
Mid 7	Term	30 (Lab Exam)			
End S	Semester Examination	40			
TA30 (Quiz, Assignments, Tutorials)					
Total		100			
Proje	ct Based Learning: Studen	its, in groups of 4-5, are required to visit Old Age Home/			
Under	rprivileged Children/ NGO/	Cancer Hospital / etc. Spend time with them for 3-4 hours. Apply			
Life S	Skills learned in understandi	ng their feeling and help them by providing solution to ease their			
stress	. Document your visit and p	resent in the class.			
Recom	mended Reading material	: Author(s), Title, Edition, Publisher, Year of Publication etc.			
(Text books, Reference Books, Journals, Reports, Websites etc. in the IEEE format)					
1. A. Wadkar, Life Skills for Success, Sage Publication Pvt Ltd, 2019					
2. Human Values, A.N. Tripathi, New Age International Pvt Ltd. Publishers New Delhi ,200					
3.	3. C. Dale, Become an Effective Leader, New Delhi: Amaryllis, 2012				
4.	H. R. Wallace et. al, Perso	nality Development, Cengage Learning India Pvt. Ltd; New Delhi,			
	2006				
5.	B. K. Mitra, Personality I	Development & Soft Skills, Oxford University Press, New Delhi,			
	2012.				
6.	M. G. Frank, D. Matsu	moto, H. S. Hwang, Nonverbal Communication: Science and			
	Applications, 2012, 1st Ed	ition, Sage Publications, New York.			
7.	W. S. Pfeiffer, Public Spea	aking, Pearson, Delhi, 2012.			
8.	S. Khera, You Can Win, M	Iacmillan Books, New York, 2003.			
9.	S. Kumar, P. Lata, Commu	unication Skills, Oxford University Press,1st, Ed. 2011			
10.	M. Raman, S. Sharma, Te	echnical Communication: Principles & Practices, 29 th Impression,			
	Oxford University Press, N	New Delhi, 2009			

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1					3		1		3			
CO2								3	3			
CO3							3	3	3			
CO4					3		2		3			
Avg					3		2	3	3			

Multimedia and Animation Workshop (22B28MA111)

Microsoft Word, Microsoft Excel, Microsoft Power Point, Introduction to Image tools, Basic Photo Corrections, Working with Selections, Layer Basics, Masks and Channels, Typographic Design and Video tools.

Course Code		22B2	8MA111	23-24				
				–Dec 2023				
Course N	Name	Mult						
Credits		2			Contac	t	1-0-2	
		Cast	dinator(a)		Hours			
		Topol	coinator(s)					
		(Alnh	abetically)					
COURS	E OUTO	COME	S: After the s	uccessful c	ompletio	n of this	s course, the	COGNITIVE
student w	ill be ab	ole to			I		,	LEVELS
CO1	explain	n the	concepts of	Microsoft	office	tools s	such as word,	Understanding
	Powerl	Point a	nd excel					Level (C2)
CO2	apply b	basic te	xt editing, tex	t formatting	g. page fo	ormattin	ig, methods and	Applying
	reasons	s for us	ing templates		1 .		1.0	Level (C3)
CO3	apply t	Dasic El Ajcroso	scel spreadshe	operations	ns, data e	entry, an	d functions and	Applying
CO4		101050		operations	2			Understanding
0.04	explair	the co	ncept of imag	e tools and	function	<mark>S</mark>		Level (C2)
CO5	make use of working with photo correction, Straightening and							Applying
COC	croppii	ig						Level (C3)
006	<mark>apply v</mark>	<mark>el.</mark>	Level (C3)					
Module	Title o	f the	Topics in th	e Module				No. of
No.	Modul	le					<u> </u>	Lectures
1.	Micros	oft	Microsoft W	ord: Creati	ing, editi	ng, savi	ng and printing	
	word		text documents, Font and paragraph formatting, Simple					
			breaks. Usin	1				
			Using Spelling and Grammar check, Understanding					
		document properties, Mail Merge						
2.	Micros	oft	Spreadsheet	basics, C				
	Excel		printing spi	readsheets,	workin	g with	functions &	
			formulas, m	odifying w	vorksheet	ts with	color & auto	
			Graphs spe	aphically 1 Peding date	entry:	ing da Using	Data Forms	2
			analyzing da	ata: Data N	Aenu. Si	ibtotal.	Filtering Data.	
			formatting	worksheet	s, Seci	uring	& Protecting	
			spreadsheets			-		
3.	Micros	oft	Opening, v	iewing, ci	reating,	and p	orinting slides,	
	Power	Point	applying aut	o layouts, a	adding cu	istom a	nimation, using	1
			slide transiti					
4	Introdu	iction	Raster vs V	ector creati	ing new i	images	saving files for	
- -	to Imag	ge	print, saving	files for w	eb/screer	n, Work	ing with Adobe	
	tools	- 0	Bridge, Usin	g the tools,	Using th	e option	ns bar and other	2
			panels, Unde	oing actions	in Photo	oshop, C	Customizing the	
			workspace, 7	Fools panel	overviev	V		
5.	Basic H	Photo	Strategy for	retouching	g, Resolu	ution a	nd image size,	2

	Corrections	Adjusting the color in Camera Raw, Straightening and cropping the image in Photoshop, replacing colors in an	
		image, adjusting saturation with the Sponge tool, repairing areas with the Clone Stamp tool, Using the	
		Spot Healing Brush tool, using content-aware fill, Applying the Unsharp Mask filter	
6.	Working	About selecting and selection tools, Using the Quick	
	Selections	selections, Using the Magic Wand tool, selecting with	2
		the lasso tools, rotating a selection, selecting with the Magnetic Lasso tool, cropping an image and erasing	2
		within a selection, Refining the edge of a selection,	
7.	Layer	About layers, Using the Layers panel, rearranging	
	Basics,	layers, applying a gradient to a layer, applying a layer	
	Channels	and channels, creating a mask, refining a mask, creating	2
	Chamiers	a quick mask, manipulating an image with Puppet	
		Warp, Working with channels	
8.	Typographic	About type, creating a clipping mask from type,	
	Design and	creating type on a path, Warping point type, Designing	_
	Video tools	paragraphs of type. Video tools: Open Shot; Shortcut;	2
		Blender; Movie Maker 10; iMovie; Kapwing;	
		Total Number of Lectures	1/
		Multimedia and Animation Workshop LAB	14
Module	Title of the	Topics in the Module	No. of Labs
Module No.	Title of the Module	Topics in the Module	No. of Labs
Module No. 1.	Title of the Module Microsoft	Topics in the Module Microsoft Word: Creating, editing, saving and	No. of Labs
Module No. 1.	Title of theModuleMicrosoftWord	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph	No. of Labs
Module No. 1.	Title of the Module Microsoft Word	Topics in the Module Microsoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, among text page breaks. Using lists and styles	No. of Labs
Module No. 1.	Title of the Module Microsoft Word	Topics in the ModuleMicrosoft Word:Creating, editing, saving andprinting text documents, Font and paragraphformatting, Simple character formatting, Insertingtables, smart art, page breaks, Using lists and styles,Working with images, Using Spelling and Grammar	No. of Labs
Module No. 1.	Title of the Module Microsoft Word	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail	No. of Labs
Module No. 1.	Title of the Module Microsoft Word	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail Merge	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeMergeSpreadsheet basics, Creating, editing, saving and	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & 	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formation.	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs Speeding data entry: Using Data Forms	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data	No. of Labs
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting	No. of Labs 1 2
Module No. 1. 2.	Title of the Module Microsoft Word Microsoft Excel	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheets	No. of Labs
Module No. 1. 2. 3.	Title of the Module Microsoft Word Microsoft Excel Microsoft	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides,	No. of Labs
Module No. 1. 2. 3.	Title of the Module Microsoft Word Microsoft Excel Microsoft Power Point	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides, Applying auto layouts, Adding custom animation, Using Data Formation, Data Formation, Data	No. of Labs
Module No. 1. 2. 3.	Title of the Module Microsoft Word Microsoft Excel Microsoft Power Point	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides, Applying auto layouts, Adding custom animation, Using slide transitions, Graphically representing data	No. of Labs 1 2 1
Module No. 1. 2. 3.	Title of the Module Microsoft Word Microsoft Excel Microsoft Power Point	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides, Applying auto layouts, Adding custom animation, Using slide transitions, Graphically representing data : Charts & Graphs, Creating Professional Slide for Presentation	No. of Labs 1 2 1
Module No. 1. 2. 3. 4.	Title of the Module Microsoft Word Microsoft Excel Microsoft Power Point	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides, Applying auto layouts, Adding custom animation, Using slide transitions, Graphically representing data : Charts & Graphs, Creating Professional Slide for PresentationRaster vs, Vector, Creating new images, Saving files	No. of Labs 1 2 1
Module No. 1. 2. 3. 4.	Title of the Module Microsoft Word Microsoft Excel Microsoft Power Point Introduction to Image	Topics in the ModuleMicrosoft Word: Creating, editing, saving and printing text documents, Font and paragraph formatting, Simple character formatting, Inserting tables, smart art, page breaks, Using lists and styles, Working with images, Using Spelling and Grammar check, Understanding document properties, Mail MergeSpreadsheet basics, Creating, editing, saving and printing spreadsheets, Working with functions & formulas, Modifying worksheets with color & auto formats, Graphically representing data: Charts & Graphs, Speeding data entry: Using Data Forms, Analyzing data: Data Menu, Subtotal, Filtering Data, Formatting worksheets, Securing & Protecting spreadsheetsOpening, viewing, creating, and printing slides, Applying auto layouts, Adding custom animation, Using slide transitions, Graphically representing data : Charts & Graphs, Creating Professional Slide for PresentationRaster vs. Vector, Creating new images, Saving files for print, Saving files for web/screen. Working with	No. of Labs 1 2 1 2

Image: Customizing the workspace, Tools panel overview Customizing the workspace, Tools panel overview 5. Basic Photo Corrections Strategy for retouching, Resolution and image size, Adjusting the color in Camera Raw, Straightening and cropping the image in Photoshop, Replacing colors in an image, Adjusting saturation with the Sponge tool, Repairing areas with the Clone Stamp tool, Using the Spot Healing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter 2 6. Working with Selection tool, Moving a selected area, Manipulating Selections, Using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Selecting with the Masks and Chamels About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and chamels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Video tools About type, Creating a Clipping mask from type, Creating type on a path, Warping point type, Shotcut: Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs 14 Exposed learning: Bad stamp and cols to perform various operations on the multimedia application. Recommenter Hammed Radius application. Componen			and other panels, Undoing actions in Photoshop,	
 5. Basic Photo Corrections Strategy for retouching, Resolution and image size. Adjusting the color in Camera Raw, Straightening and cropping the image in Photoshop, Replacing colors in an image, Adjusting saturation with the Sponge tool, Repairing areas with the Chone Stamp tool, Using the Spot Healing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter 6. Working with Selection tool, Moving a selected area, Manipulating Selections Selections, Using the Magic Wand tool, Selecting with the Magnetic Lasso tool , Cropping an image and erasing within a selection .Refining the edge of a selection. 7. Layer Basics, About layers, Using the Layers panel, Rearranging Masks and Channels About Layers, Using the Layers panel, Rearranging in Amasks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp. Working with channels 8. Typographic Design and Video tools About type, Creating a Clipping mask from type, Creating type on a path, Warping point type, Designing paragraphs of type. Video tools: OpenShot; 2 Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommende Reading material: J. Lambert, F. Curtis, Microsoft Office 2019. Step Step. Microsoft Press, 2018. L. Foulkes, Learn Microsoft Office 2019. Step Step. Microsoft Press, 2018. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and			Customizing the workspace, Tools panel overview	
Corrections Adjusting the color in Camera Raw, Straightening and cropping the image in Photoshop, Replacing colors in an image, Adjusting saturation with the Sponge tool, Repairing areas with the Clone Stamp tool, Using the Spot Healing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter 2 6. Working About selecting and selection tools, Using the Quick with Selections. Using the Magic Wand tool. Selecting with the lasso tools, Rotating a selection, Selecting with the lasso tools, Rotating a selection, Selecting with the lasso tools, Rotating a selection, Selecting with the lasso tools. Cropping an image and erasing within a selection and channels. Creating a mask. Refining a mask. Creating a quick mask, Manipulating an image with Puppet Warp, Working with chanels 2 7. Layer Basics, About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels. Creating a quick mask, Manipulating an image with Puppet Warp, Working with chanels 2 8. Typographic Design and Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Eventuation Criteria Maximum Marks Mid Term 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize-m	5.	Basic Photo	Strategy for retouching, Resolution and image size,	
Image: Adjusting saturation with the Sponge tool: 2 2 Repairing areas with the Clone Stamp tool. Using the Spot Healing Brush tool. Using content-aware fill, Applying the Unsharp Mask filter 2 6. Working With Selection tool, Moving a selection tools, Using the Quick Selections tools, Using the Magic Wand tool, Selecting with the Iasso tools, Rotating a selection, Selecting with masks and Channels About Iayers, Using the Layers panel, Rearranging Iayers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and Channels, Creating a unck mask, Maripulating an image with Puppet Warp. Working with channels 2 8. Typographic Design and Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs 14 Evaluation Criteria 30 (Lab Exam) Components Maximum Marks Mid Term 30 (Lab Exam) End Senseter Examination 40 7 Total number of Labs Intermed Reading material: 100 Project based learning: Each student in		Corrections	Adjusting the color in Camera Raw, Straightening and	
an image, Adjusting saturation with the Sponge tool, Repairing areas with the Clone Stamp tool, Using the Spot Healing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter 2 6. Working with Selection sol, Moving a selected area, Manipulating Selections 2 Selections Selection tools, Using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Selecting with Magnetic Lasso tool , Cropping an image and erasing within a selection, Refining the edge of a selection. 2 7. Layer Basics, Masks and Channels About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp. Working with channels 2 8. Typographic Video tools Designing paragraphs of type. Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recurring the currice of			cropping the image in Photoshop, Replacing colors in	
Image: Second Stamp tool, Using the Spot Healing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter Applying the Unsharp Mask filter 6. Working with Selection, Selecting and selection tools, Using the Quick Selections, Using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Selecting with the Amage Wand tool, Selecting with the Magnetic Lasso tool, Cropping an image and erasing within a selection, Refining the edge of a selection. 2 7. Layer Basics, Mask and Channels, About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and Channels, Creating a mask, Refining an amask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Vide otools About type, Creating a clipping mask from type, Creating type on a path, Warping point type, Designing paragraphs of type. Video tools: OpenShot; Shotcut: Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 2 Total number of Labs 14 Evaluation Criteria 30 (Lab Exam) Components Maximum Marks Mid Term 30 (Lab Exam) End Evaluation Criteria 30 (Quiz, Assignments, Tutorials) Total number of Labs Image: Section Section Section Section Sections. Notice Sections Sectionse on the multimedia application. <			an image, Adjusting saturation with the Sponge tool,	2
Image: Spot realing Brush tool, Using content-aware fill, Applying the Unsharp Mask filter Applying the Unsharp Mask filter 6. Working with Selection tool, Moving a selected area, Manipulating selections using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Selecting with the lasso tools, Rotating a selection, Selecting with the Magnetic Lasso tool, Cropping an image and erasing within a selection , Refining the dege of a selection. 2 7. Layer Basics, Masks and Channels, Creating and the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating a minage with Puppet Warp. Working with channels 2 8. Typographic Design and Video tools Oreating type on a path, Warping point type, Designing paragraphs of type. Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs Total number of Labs It also student in a group of 4-5 will apply the concepts of multimedia and utilizer multimedia tools to perform various operations on the multimedia application. Reading mater. It also the class tool of the 2019 Step by Step. Microsoft Press, 2018. Layer Basic, Manipulating an image with Puppet Warp. Working with channels Typographic Design and Type, Creating a type, Video tools: OpenShot; Shotcut; Blender; Movie			Repairing areas with the Clone Stamp tool, Using the	
6. Working with Selections About selecting and selection tools, Using the Quick Selections 2 7. Layer Basics, Masks and Channels About layers, Using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Selecting, with a selection. Refining the edge of a selection, 2 7. Layer Basics, Masks and Channels About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Video tools About type, Creating a Clipping mask from type, Creating type on a path, Warping point type, Designing paragraphs of type. Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs 14 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. L. Foulkes, Learn Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. Ist ed. Packt Publishing, 2020. Web. 25 Sept. 2021. D.W. Beskeen, C. M. Crann, L. Wermers, J. Duffy, and L. Friedrichsen,			Spot Healing Brush tool, Using content-aware fill,	
 a. Working with Selection and selection and science of the account of the asso tools, Rotating an elected area, Manipulating selections. Using the Magic Wand tool, Selecting with the Magnetic Lasso tool, Cropping an image and erasing within a selection, Refining the edge of a selection. 7. Layer Basics, Mabut layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying alyer style, Flattening and saving files, Working with masks and Channels. Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 8. Typographic About type, Creating a clipping mask from type, Creating type on a path, Warping point type, Creating type on a path, Warping and Selection of Labs 14 Evultation Criteria Components Maximum Marks Maximum Marks Mid Term 30 (Lab Exam) End Semester Examination 40 Total 100 About spectrom various operations on the multimedia application. Recenter Examination 40 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step, Microsoft Press, 2018. L. Foulkes, Learn Microsoft Office 2019. Ist ed. Packt Publishing, 2020. Web. 25 Sept. 2021. J. Lambert, F. Curtis, Microsoft Office 2019. Ist ed. Packt Publishing, 2020. Web. 25 Sept. 2021. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Fried	6	Working	About selecting and selection tools. Using the Quick	
Selections Selections, Using the Magic Wand tool, Selecting with the lasso tools, Rotating a selection, Returning in layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Vide type, Creating a clipping mask from type, Designing paragraphs of type. Video tools: OpenShot; 2 2 Video tools Maximum Marks 14 Components Maximum Marks 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommende Reading material: 1 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L.	0.	with	Selection tool Moving a selected area Manipulating	
Image: Section in the lasso tools, Rotating a selection, Selecting with the Magnetic Lasso tool, Cropping an image and erasing within a selection , Refining the edge of a selection. 2 7. Layer Basics, Moutlayers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Creating a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Chonels, Eventing a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Chonels, Creating a clipping mask from type, Creating type on a path, Warping point type, Creating type on (a path, Warping point type), Creating type on (a path, Warping point type, Creating type on (a path, Warping point type), Creating type), Creating type on (a path, Warpi		Selections	selections. Using the Magic Wand tool, Selecting with	
Image: Image			the lasso tools. Rotating a selection. Selecting with the	2
Image: Second Secon			Magnetic Lasso tool, Cropping an image and erasing	
7. Layer Basics, Masks and Channels About layers, Using the Layers panel, Rearranging layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Video tools About type, Creating a clipping mask from type, Designing paragraphs of type. Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 2 Total number of Labs Total number of Labs Total number of Labs Total number of Labs Network the apply the concepts of multimedia application; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc Total number of Labs			within a selection, Refining the edge of a selection,	
Masks and Channels layers, Applying a gradient to a layer, Applying a layer style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Video tools About type, Creating a clipping mask from type, Creating type on a path, Warping point type, Design and Video tools 2 5. Typographic Design and Video tools Maximum Marks Oreating type on a path, Warping point type, Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs Total number of Labs 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recorder Reading mater: 1 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. Ist ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003.	7.	Layer Basics,	About layers, Using the Layers panel, Rearranging	
Channels style, Flattening and saving files, Working with masks and channels, Creating a mask, Refining a mask, Creating a quick mask, Manipulating an image with Puppet Warp, Working with channels 2 8. Typographic Design and Video tools About type, Creating a clipping mask from type, Creating type on a path, Warping point type, Video tools 2 9. Design and Video tools Designing paragraphs of type. Video tools: OpenShot; Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs Total number of Labs Namum Marks Mid Term 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total number of Pass of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recent Heading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn,		Masks and	layers, Applying a gradient to a layer, Applying a layer	
Image: Section of the section of t		Channels	style, Flattening and saving files, Working with masks	2
Image: Image			and channels, Creating a mask, Refining a mask,	-
Between two servers of the servers of the servers of two servers of two servers of two servers of two servers of the servers			Creating a quick mask, Manipulating an image with	
3. Typographic Design and Video tools About type, Creating type on a path, Warping point type, Designing paragraphs of type. Video tools: OpenShot; 2 Video tools Designing paragraphs of type. Video tools: OpenShot; 2 Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs 14 Events Maximum Marks Mid Term 30 (Lab Exam) 14 End Semester Examination 40 40 TA 30 (Quiz, Assignments, Tutorials) 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. <th>0</th> <th>True a graubia</th> <th>Puppet warp, working with channels</th> <th></th>	0	True a graubia	Puppet warp, working with channels	
Video tools Oreating type on a pain, wapping point type, Video tools: OpenShot; 2 Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 2 Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Total number of Labs 14 Components Maximum Marks Mid Term 30 (Lab Exam) 14 Evaluation Criteria Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recurstis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. OW. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019.	ð.	Typographic Design and	About type, Creating a clipping mask from type, Creating type on a path Warning point type	
Yindo tools Designing paragraphs of type. Yindo tools: Openbildt, Shotcut; Blender; Movie Maker 10; iMovie; Kapwing; KineMaster, Lightworks etc 14 Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Components Maximum Marks Mid Term 30 (Lab Exam) 100 Following paragraphs of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. S. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CO-PO-PSO Mapping:		Video tools	Designing paragraphs of type Video tools: OpenShot:	2
		video toois	Shotcut: Blender: Movie Maker 10: iMovie: Kanwing:	2
Total number of Labs 14 Total number of Labs 14 Evaluation Criteria Total number of Labs 14 Components Maximum Marks Mid Term 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2021. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CO-PO-PSO Mapping:			KineMaster, Lightworks etc	
Waximum Marks Maximum Marks Mi S0 (Lab Exam) Maximum Marks S0 (Lab Exam) Maximum Marks S0 (Lab Exam) Err S0 (Lab Exam) S0 (Quiz, Assignments, Tutorials) Tota J00 S0 (Quiz, Assignments, Tutorials) Tota Io0 S0 (Quiz, Assignments, Tutorials) Tota J00 S0 (Quiz, Assignments, Tutorials) Tota Io0 S0 (Quiz, Assignments, Tutorials) Tota J00 S0 (Quiz, Assignments, Tutorials) S0 (Quiz, Assignments) J01 J12 Bach structure is a group of 4-5 will apply the concets of multimedia application. J12 J12 Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. J02 Quit Quit			Total number of Labs	14
Components Maximum Marks Mid Term 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003.	Eva	luation Criteria		
Mid Term 30 (Lab Exam) End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003.	Cor	nponents	Maximum Marks	
End Semester Examination 40 TA 30 (Quiz, Assignments, Tutorials) Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 30 D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CU-PSO Mapping: Eutern State	Mid	l Term	30 (Lab Exam)	
Total 100 Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CU-PO-PSO Mapping:	End	Semester Examination	on 40 20 (Ouiz Assistments Tutorisla)	
Project based learning: Each student in a group of 4-5 will apply the concepts of multimedia and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: 1. J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. 2. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. 3. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003.	IA Tot	പ	30 (Quiz, Assignments, Tutoriais)	
 Integret based learning: Each state in a group of 1 5 km apply the concepts of mathematical and utilize multimedia tools to perform various operations on the multimedia application. Recommended Reading material: J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. 	Pro	ai jiect hased learning:	Each student in a group of 4-5 will apply the concepts of	multimedia and
It is the formula of th	utili	ze multimedia tools t	o perform various operations on the multimedia application	on.
 J. Lambert, F. Curtis, Microsoft Office 2019 Step by Step. Microsoft Press, 2018. L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. 	Rec	commended Reading	material:	
 L. Foulkes, Learn Microsoft Office 2019. 1st ed. Packt Publishing, 2020. Web. 25 Sept. 2021. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. <u>CO-PO-PSO Mapping:</u> 	1.	J. Lambert, F. Curtis	, Microsoft Office 2019 Step by Step. Microsoft Press, 20)18.
 2021. D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CO-PO-PSO Mapping: 		L. Foulkes, Learn M	Aicrosoft Office 2019. 1st ed. Packt Publishing, 2020.	Web. 25 Sept.
 D.W. Beskeen, C. M. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illustrated Microsoft Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. CO-PO-PSO Mapping: 	2.	2021.		Ĩ
 Office 365 & Office 2019, 2019. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. 	2	D.W. Beskeen, C. M	1. Cram, L. Wermers, J. Duffy, and L. Friedrichsen, Illust	rated Microsoft
 4. P. K. Andleigh, K. Thakrar, —Multimedia Systems and Design, PHI, 2003. 5. D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. <u>CO-PO-PSO Mapping:</u> 	з.	Office 365 & Office	2019, 2019.	
 D. Hearn, M.P. Baker, —Computer Graphics C Version, Pearson Education, 2003. <u>CO-PO-PSO Mapping:</u> 	4.	P. K. Andleigh, K. T	hakrar, —Multimedia Systems and Design, PHI, 2003.	
<u>CO-PO-PSO Mapping:</u>	5.	D. Hearn, M.P. Bake	er, —Computer Graphics C Version, Pearson Education, 2	2003.
	<u>CO</u>	-PO-PSO Mapping:		

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	3			2			1	1	3	2	2	2

CO2	3	1	1	2		1	1	3	2	2	2
CO3	3	1	1	2			1	3	2	2	2
CO4	3	1	1	3	2	1	1	3	3	3	3
CO5	3	1	1	3	2	1	1	3	3	3	3
CO6	3	1	1	3	2	1	1	3	3	3	3
Avg	3	1	1	3	2	1	1	3	3	3	3

DOS Workshop (23xxxxxxx)

DOS course covers a broad range of topics, from basic file management and command-line navigation to advanced topics such as networking and programming. The course may also include hands-on projects and exercises to help students develop practical skills in using and managing DOS.

Course Co	ode	23xxxxxxx	X	Semester Odd	l	Semester I Session Month from Jul 2023	2023-24 3 to Dec 2023				
Course Na	ame	DOS Work	shop				0 10 DCC 2025				
Credits		2	Shop		Cor	ntact Hours	0-0-4				
Faculty		Coordinate	or(s)	r(s)							
(Names)		Teacher(s)	. /								
		(Alphabetic	cally)								
COURSE	COGNITIVE										
student wi	student will be able to LEVELS										
CO1	demon	Understand									
		Level (C2)									
CO2	apply DOS file utilities to perform complex tasks. Manage files and Apply Level										
	directo	ries, file permi	issions, a	and navigate the f	ïle s	ystem	(C3)				
CO3	apply o	lisk partitionin	g, forma	atting and error re	solv	ing	Apply Level				
							(C3)				
CO4	experii	ment with bate	h files a	nd scripts.			Apply Level				
							(C3)				
CO5	identif	y and resolve c	common	issues that may a	rise	when using DOS.	Apply Level				
							(C3)				
Module	Title o	of the	Topic	s in the Module	e e		No. of				
No.	Modu	le					Lectures				
1.	Intro	luction to	Overvi	iew of DOS	hist	ory and architecture,	4				
	DOS		Comm	and-line interface	bas	sics, Navigating through					
			the file	e system							
2.	File a	nd	Creati	ng, copying, mo	ovin	g, and renaming files	4				
	direct	ory	and d	rectories, Delet	ing	files and directories,					

	managementViewing file and directory information									
3.	Disk	Managing disk partitions, Formatting disks,	4							
	management	Checking disk status and errors								
4.	Batch files and	Creating and running batch files and scripts,	4							
	scripts	Using variables and control structures, Automating								
		tasks in DOS								
5.	External	Using external programs and utilities to enhance the	4							
	programs and	functionality of DOS, Installing and configuring								
	utilities	programs								
6.	Advanced DOS	Networking in DOS, Security in DOS,	4							
	topics	Programming in DOS								
7.	DOS-based	DOS-based applications, such as word processors,	4							
	applications and	spreadsheets, and databases. This includes								
	Troubleshooting	identifying and resolving common issues that may								
		arise when using DOS.								
	ļ.	Total number of Labs	28							
Evaluat	ion Criteria									
Components Maximum Marks										
Compoi	nents	Viaximum Marks Mid Vivo 20								
Compose Mid Viv	nents ⁷ a	20								
Compor Mid Viv End Viv	nents 7a 7a	20 20								
Compor Mid Viv End Viv TA	nents za za	20 20 60								
Compor Mid Viv End Viv TA Total	nents /a /a	20 20 60 100								
Compor Mid Viv End Viv TA Total Project	nents 'a 'a <mark>based learning:</mark> Each	20 20 60 100 a student in a group of 2 will apply the advance	ed programming							
Compor Mid Viv End Viv TA Total Project concepts	nents ⁷ a ³ a based learning: Each ⁵ in DOS Environment	20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems.	ed programming							
Compor Mid Viv End Viv TA Total Project concepts Recomm	nents 'a based learning: Each in DOS Environment nended Reading mate	20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of F	ed programming Publication etc.							
Compor Mid Viv End Viv TA Total Project concepts Recomm (Text bo	hents a based learning: Each in DOS Environment hended Reading mate boks, Reference Books,	20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of F Journals, Reports, Websites etc.)	ed programming Publication etc.							
Compor Mid Viv End Viv TA Total Project concepts Recomm (Text bo 1.	nents 'a based learning: Each s in DOS Environment nended Reading mate boks, Reference Books, D. Gookin, DOS for Du	20 20 60 100 1 student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of F Journals, Reports, Websites etc.) mmies. Wiley Publishing, Inc., 2003.	ed programming Publication etc.							
CompositionMid VivEnd VivTATotalProjectconceptsRecomment(Text box)1.2.	based learning: Each based learning: Each in DOS Environment nended Reading mate boks, Reference Books, D. Gookin, DOS for Du W. R. Stanek, Windows 2011.	20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of H Journals, Reports, Websites etc.) mmies. Wiley Publishing, Inc., 2003. Command-Line Administrator's Pocket Consultant. Mi	ed programming Publication etc.							
CompositionMid VivEnd VivTATotalProjectconceptsRecomma(Text box)1.2.3.	hents 'a 'a based learning: Each in DOS Environment nended Reading mate boks, Reference Books, D. Gookin, DOS for Du W. R. Stanek, Windows 2011. Microsoft Corporation.	20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of H Journals, Reports, Websites etc.) mmies. Wiley Publishing, Inc., 2003. Command-Line Administrator's Pocket Consultant. Mi Using MS-DOS 6.22. Microsoft Press., 1994.	ed programming Publication etc. icrosoft Press.,							
CompositionMid VivEnd VivTATotalProjectconceptsRecommendation(Text box)1.2.3.4.	based learning: Each in DOS Environment nended Reading mate ooks, Reference Books, D. Gookin, DOS for Du W. R. Stanek, Windows 2011. Microsoft Corporation. I G. Chappell, DOS Inter	20 20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of H Journals, Reports, Websites etc.) mmies. Wiley Publishing, Inc., 2003. Command-Line Administrator's Pocket Consultant. Microsoft Press., 1994. mals. Addison-Wesley Professional., 1994.	ed programming Publication etc.							
CompositionMid VivEnd VivTATotalProjectconceptsRecommendation(Text box)1.2.3.4.5.	based learning: Each in DOS Environment in DOS Environment mended Reading mate ooks, Reference Books, D. Gookin, DOS for Du W. R. Stanek, Windows 2011. Microsoft Corporation. I G. Chappell, DOS Inter J. Prosise, PC Magazine	20 20 20 60 100 n student in a group of 2 will apply the advance to solve practical problems. rial: Author(s), Title, Edition, Publisher, Year of H Journals, Reports, Websites etc.) mmies. Wiley Publishing, Inc., 2003. Command-Line Administrator's Pocket Consultant. Mic Using MS-DOS 6.22. Microsoft Press., 1994. DOS Power Tools. Ziff-Davis Press., 1994.	ed programming Publication etc. icrosoft Press.,							

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	2	2	2	2	1		1	1	2	3	3	3

CO2	3	3	3	2	1	2	1	2	3	3	3
CO3	3	3	3	2	1	2	1	2	3	3	3
CO4	3	3	3	2	1	2	1	2	3	3	3
CO5	3	3	3	3	1	3	1	3	3	3	3
Avg	3	3	3	3	1	2	1	3	3	3	3

Introduction to Digital Technologies (23B66CS114)

Course (Code	23B66	5CS114	CS114 Semester: Odd		Sem Mor	nester I Session 2023-2 nth from July 2023 –D	24 Jec 2023			
Course N	Name	Intro	luction to Di	igital T	echnol	ogies					
Credits		2									
		Coor	dinator(s)								
		Teach	er(s)								
		(Alph	abetically)					Γ			
COURS	E OUTC	OMES	After the s	uccessf	ul comp	pletion	n of this course, the	COGNITIVE			
student w	vill be ab	le to						LEVELS			
CO1	Underst	Understand									
CO2	Explore	Understand									
CO3	Apply of	Apply Level									
	A 1	<u> </u>	11 .	1		•	1	(C3)			
CO4	Analyze	e a give	n problem to	Analyze							
Module	Title of	the	Topics in th	he Mod	ule			No. of			
INO.	Module	a -1	Tutus das stiss	A T			antala MI				
1.	Artillici	al	Algorithma	1 to AI, Trainis	4						
	memge and Ma	ahina	Algorithms,								
	Learnin	chine og									
2	Data	¹ B	Introduction	Data (Collect	ion S	torage and	4			
4.	Analyti	cs and	Managemer								
	Big Dat	ta ana	Techniques								
	2.8.24		Application	s and F	uture T	rends	0 <u></u> ,				
3.	Cloud,	Fog	Introduction	3							
	and Edg	ge	World Impl								
	Compu	ting	1								
4.	Internet	t of	Introduction	n, Featu	res, Ad	vanta	ges and	3			

	Things	Disadvantages, IoT Devices, IoT Framework, IoT								
	C	Applications, IoT Development Kit								
5.	Blockchain	Introduction to Blockchain Technology, Blockchain	4							
	and Cyber	Security and Vulnerabilities, Cryptographic								
	Security	Foundations for Blockchain Security, Integrating								
		Blockchain with Cybersecurity, Future Trends and								
		Challenges								
6.	Augmented	Introduction to Augmented Reality and Virtual	3							
	Reality and	Reality, UI and UX Design for AR and VR,								
	Virtual									
	Reality, UI,									
	UX									
7.	Robotic	Introduction, Robotic Automation in Smart Cities,	4							
	Automation									
	and Smart									
	Cities									
8.	Brain	Introduction, BCI Technologies and Modalities,	3							
	Computer	Signal Processing and Machine Learning for BCI,								
	Interface	BCI Applications in Assistive Technology, BCI in								
		Gaming and Virtual Reality								
Gaming and Virtual Reality										
		Total Number of Lectures	28							
Evalua	ation Criteria	Total Number of Lectures	28							
Evalua Comp	ation Criteria onents	Total Number of Lectures Maximum Marks	28							
Evalu Comp Mid Te	ation Criteria onents erm	Total Number of Lectures Maximum Marks 30 (Lab Exam)	28							
Evalua Comp Mid Te End Se	ation Criteria onents erm emester Examination	Maximum Marks 30 (Lab Exam) on 40	28							
Evalua Comp Mid Ta End Sa TA	ation Criteria onents erm emester Examination	Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials)	28							
Evalua Comp Mid Te End Se TA Total	ation Criteria onents erm emester Examinatio	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100	28							
Evalua Comp Mid Te End Se TA Total Projec	ation Criteria onents erm emester Examination ct based learning:	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap	28							
Evalua Comp Mid To End Se TA Total Project the dig	ation Criteria onents erm emester Examination et based learning: gital technologies.	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a	28 oplication using and its solution							
Evalua Comp Mid Tend Se TA Total Project the dig which	ation Criteria onents erm emester Examination et based learning: gital technologies. 7 will help their emp	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector.	28 oplication using and its solution							
Evalua Comp Mid Tend Se TA Total Project the dig which Recon	ation Criteria onents erm emester Examination et based learning: gital technologies. ' will help their emp nmended Reading	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector. gmaterial: Author(s), Title, Edition, Publisher, Year of H	28 pplication using and its solution Publication etc.							
Evalua Comp Mid To End Se TA Total Project the dig which Recon (Text b	ation Criteria onents erm emester Examination et based learning: gital technologies. 7 will help their emp nmended Reading books, Reference E	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a oloyability into IT sector. g material: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE formation	28 oplication using and its solution Publication etc. at)							
Evalua Comp Mid Te End Se TA Total Projec the dig which Recon (Text b 1.	ation Criteria onents erm emester Examination et based learning: gital technologies. 7 will help their emp nmended Reading books, Reference E Foster Provost and	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector. gmaterial: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE formation Tom Fawcett. Data Science for Business. O'Reilly Media, Inc	28 oplication using and its solution Publication etc. at) , 2013.							
Evaluation Comp Mid T End Se TA Total Project the dig which Recon (Text b 1. 2.	ation Criteria onents erm emester Examination et based learning: gital technologies. ' will help their emp omended Reading books, Reference E Foster Provost and Hyatt Saleh. Machi	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector. material: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE form: Tom Fawcett. Data Science for Business. O'Reilly Media, Inc ne Learning Fundamentals. Packt Publishing, 2018.	28 oplication using and its solution Publication etc. at) , 2013.							
Evalua Comp Mid To End Se TA Total Project the dig which Recon (Text 1 1. 2. 3.	ation Criteria onents erm emester Examination et based learning: gital technologies. ' will help their emp mended Reading books, Reference F Foster Provost and Hyatt Saleh. Machi Vecchiola, Christi	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap Fney will give a practical demonstration of the problem a bloyability into IT sector. gmaterial: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE formation Tom Fawcett. Data Science for Business. O'Reilly Media, Inc ne Learning Fundamentals. Packt Publishing, 2018. an., Selvi, S.Thamarai., Buyya, Rajkumar. Mastering Ch	28 oplication using and its solution Publication etc. at) , 2013.							
Evaluation Comp Mid Tend Set TA Total Project the dig which Recon (Text b 1. 2. 3.	ation Criteria onents erm emester Examination et based learning: gital technologies. ' will help their emp onended Reading books, Reference E Foster Provost and Hyatt Saleh. Machi Vecchiola, Christi Foundations and A	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a olyability into IT sector. g material: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE formation Tom Fawcett. Data Science for Business. O'Reilly Media, Inc ne Learning Fundamentals. Packt Publishing, 2018. an., Selvi, S.Thamarai., Buyya, Rajkumar. Mastering Ch pplications Programming. Netherlands, Elsevier Science, 2012	28 oplication using and its solution Publication etc. at) , 2013. oud Computing: 3.							
Evalua Comp Mid To End Se TA Total Project the dig which Recon (Text 1 1. 2. 3. 4.	ation Criteria onents erm emester Examination et based learning: gital technologies. ' will help their emp mended Reading books, Reference E Foster Provost and Hyatt Saleh. Machi Vecchiola, Christi Foundations and A Vijay Madisetti, Au	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector. gmaterial: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE form: Tom Fawcett. Data Science for Business. O'Reilly Media, Inc. ne Learning Fundamentals. Packt Publishing, 2018. an., Selvi, S.Thamarai., Buyya, Rajkumar. Mastering Ch pplications Programming. Netherlands, Elsevier Science, 2013 rshdeepBahga, Internet of Things, "A Hands on Approach", Total Number of Lectures	28 oplication using and its solution Publication etc. at) , 2013. oud Computing: 3. University Press,							
Evalua Comp Mid Te End Se TA Total Project the dig which Recon (Text b 1. 2. 3. 4.	ation Criteria onents erm emester Examination et based learning: gital technologies. 7 will help their emp onended Reading books, Reference H Foster Provost and Hyatt Saleh. Machi Vecchiola, Christi Foundations and A Vijay Madisetti, An 2015.	Total Number of Lectures Total Number of Lectures Maximum Marks 30 (Lab Exam) on 40 30 (Quiz, Assignments, Tutorials) 100 Each student in a group of 3-4 will solve a real-world ap They will give a practical demonstration of the problem a ployability into IT sector. g material: Author(s), Title, Edition, Publisher, Year of H Books, Journals, Reports, Websites etc. in the IEEE formation Tom Fawcett. Data Science for Business. O'Reilly Media, Inc ne Learning Fundamentals. Packt Publishing, 2018. an., Selvi, S.Thamarai., Buyya, Rajkumar. Mastering Ch pplications Programming. Netherlands, Elsevier Science, 2013 rshdeepBahga, Internet of Things, "A Hands on Approach", The sector of the sector of the sector.	28 oplication using and its solution Publication etc. at) , 2013. oud Computing: 3. University Press,							

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO-CS	PSO-IT	PSO-CP
CO1	1								1	1	1	
CO2	1			2					2	2	2	

CO3	2		2	3	2	2	2	3	3	3	
CO4	2	3		3	2	2	2	3	3	3	
Avg	1.5	3	2	2.67	2	2	2	2.25	2.25	2.25	