RGPV (DIPLOMA WING) BHOPAL)MA	OBE (FOR THE	CURRICULUM COURSE	FORMA	Г-3	Sheet No. 1/5	
Branch	Co	mpute	Scien	ce & Engineeri	ng	Semester		VI	
Course Code			Course Network and Cyber Security Name						
Course Out	com	e- 1	Identi attack	-	system security i	issues and	Teach Hrs	Marks	
Learning O	utco	ome 1	Expla systen		l concepts of in	nformation	8	10	
Contents			integri inform	ty, Non-repudiat	nation system, PAI tion, issues in info chitecture of informa	rmation sec	curity,	goals of	
Method of A	lsses	sment	Extern	al: End semester	theory examination (Pen paper te	est).		
Learning O	utco	ome 2	Illustr	rate the concept a	and issues of hackin	g	8	10	
Contents			Introduction to hacking, types of hacking: phishing, cookie theft, Dos, DNS Spoofing, types of hackers: black ,grey, white hackers, ethical hacking, penetration testing, issues in ethical hacking						
Method of A	sses	sment	Internal pen paper test						
Learning O	utco	ome 3	Explain the DoS (Denial of Service Attack) 8 10						
Contents Denial of service attacks, Flooding attack, distributed denial of servattacks, application based bandwidth attack, defense against Expression of the content of t									
Method of A	sses	sment	Extern	al: End semester	theory examination (Pen paper to	est).		
Course outo	come	e 2	Descri		y, encryption and do	Jet J P tron	Teach Hrs	Marks	
Learning O	utco	ome 4	Deter		non type of cryp	tographic	10	10	

RGPV WING) B	RGPV (DIPLOMA WING) BHOPAL			OBE (FOR THE	FORMA		Sheet No. 2/5			
Branch	Co	mpute	r Scien	Science & Engineering Semeste				/ I		
Course Code				Course Name	Network and	Cyber Secu	ırity			
Contents			moder hash substit	Basic elementary cryptography, Steganography, characteristics of modern cryptography, cryptography techniques: encryption decryption, hash function, MaC, introduction to ciphers, types of ciphers: substitution cipher ,transposition ciphers , block ciphers (AES and DES) techniques						
Method of Assessment External: End semester theory examination (Pen paper test).										
Learning O	utco	ome 5	Comp systen	-	and asymmetric	encryption	9	10		
Contents	Components of cryptosystem, Types of cryptosystem: symmetric Asymmetric key encryption, challenges of symmetric and asymmetric cryptosystem, Key management in cryptography: public and private cryptosystem, challenges of public key system. Attacks of cryptosystem passive attack, active attack						mmetric vate key			
Method of A	lsses	sment	Interna	al: Pen paper test						
Learning O	utco	ome 6	Apply authentication techniques				7	10		
Contents			Authe		cation, need of authernes:- message authentes		tal signa	ature		
Method of A	Isses	ssment	Extern	al: Laboratory ob	servation and viva v	oce.				
Course outc	ome	3	Determent threat	_	ection Techniques	from intrus	sion an	d other		
Learning O	utco	ome 7	Exam	ine security polic	cies of Operating Sy	stem	6	10		
Contents Introduction to Intrusion detection system, Intrusion prevention system. Security policies of operating system.						system,				
Method of A	Isses	ssment	Extern	al: Laboratory ob	servation and viva v	oce.				

RGPV WING) B		(DIPL(PAL	OMA	OBE FOR THE	CURRICULUM COURSE	FORMA	Γ-3	Sheet No. 3/5		
Branch	Co	mpute	r Scien	ce & Engineer	ring	Semester		VI		
Course Code				Course Name	Network and	Cyber Secu	ırity			
Learning O	utco	ome 8		Distinguish between different types of security 8 10 threats						
Contents			malici	ous codes, logic	rare, types of malware bombs, ransom ware em: hacking, crackin	s, zombies	, Troj	an horse,		
Method of A	Isses	sment	External: End semester theory examination (Pen paper test).							
Learning O	utco	ome 9	Expla	in firewall secu	rities of windows		10	10		
Mathad of A	A s a a a	om ant	Introduction to firewalls, Types of Firewalls, Need of fir Function of firewalls, enabling and disabling firewalls, Management in firewall, VPN Security Basic functions of Antivirus, advantages and disadvantages of an Differentiate between Firewalls and Antivirus, some examples viruses.					lls, User antivirus,		
Method of A				ze the Regul	atory framework		· 	a Secure		
Learning O	utco	me 10	Classi	fy particulars o	f cyber Security		7	10		
Contents			cyber	terrorism, the st	space, cyber-attacks ate and Private Sector and information sector.	or in Cybers _l	-			
Method of A	Isses	sment	Extern	nal: End semester	r theory examination	(Pen paper te	est).			
Learning O	utco	ome 11	List st	teps to ensure so	ecurity of web brows	ser	8	10		
Contents E-mail security services, concept of web services, characteristics of services, architecture of web services, components of web services implementation of web browser security, web security standards.										
Method of A	\ses	sment	Interna	al : Laboratory o	bservation / Lab File					

RGPV WING) BHO	(DIPL(PAL	OMA	OBE (FOR THE	FORMA		Sheet No. 4/5			
Branch Co	ompute	r Scien	ce & Engineeri	ng	Semester	V	/I		
Course Code			Course Name	Network and	Cyber Secu	ırity			
Learning Outco	ome 12	Elabo	rate features of a	any mobile security	app	7	10		
Contents		wi-fi	Wireless security basics: concepts, access points, network, standards, wi-fi authentication modes, Wireless threats and its types, Security challenges in mobile device and cloud security						
Method of Asses	ssment	Interna	al : Laboratory ob	servation					
Learning Outco	ome 13	Demo	nstrate security	vulnerabilities of e-	commerce	8	10		
Contents Method of Asses	esm <i>o</i> nt	Essentials of e-commerce security, steps to ensure security, electron payment system, types of electronic payment system, security electronic payment system.							
			•	servation and viva v		Teach	T		
Course Outcom	ie - 5	Summarize security standards and cyber laws					Marks		
Learning Outco	ome 14	Discuss the Cyber security standards and its basic 8 laws 10							
Contents		Regula	ations and strate 001, Introduction	nd its objectives, Integies, Roles of Int to Indian IT Act 20	ernational I	Law, Ba	asics of		
Method of Asses	ssment	Extern	al: End semester	theory examination (Pen paper te	est).			
Learning Outcome 15 Interpret Legal information security governance 8 and regulatory issues.					10				
Contents			•	lures, Developing information and the l	• •	olicies,	disaster		
Method of Asses	ssment	Interna	al: Short Answer	Type Test/Quiz/Pen	Paper Test				

REFERENCE BOOKS:

S No	Title & Publication	Author
1	Cryptography and Network Security (principles and approaches)	William Stallings Pearson Education
2	Principles of Information Security	Whitman, Thomson.
3	Network Security Essentials (Applications and Standards)	William Stallings Pearson Education
4	https://en.wikipedia.org/wiki/Information_Technology_Act,_2000	
5	https://en.wikipedia.org/wiki/IT_law	
6	E-books/E-tools/Relevant software to be used as recommended by AICTE/NITTTR/RGPV	

Suggested List of Experiments:

- 1. Write a program to implement concept of authentication. (Collect a password from user and test for user validity).
- 2. Write a program to implement the concept of RSA algorithm.
- 3. Install intrusion detection software and monitor behavior of other software.
- 4. Install and configure windows firewall
- 5. Install and configure security protocols on windows.
- 6. Configure browser security with different extensions.
- 7. Install and configure SMTP sever.
- 8. Install and configure antivirus software for security.
- 9. Configure wireless network and its security protocol.
- 10. Study and implementation of e-commerce security protocols and software.
- 11. Setup secure network in laboratory.

RGPV (DIPLOMA WING) BHOPAL			OBE CURRICULUM FOR THE COURSE			FORMA	Т-3	Sheet No. 1/5		
Branch	Coi	mputer	Scienc	ce and Engineer	ing		Sen	nester	VI	
Course Code				Course Name	E-Gover	nance	and l	Digital M	larket	ing
Course C	Outc	ome -		entrepreneurship project report			Teac h Hrs	Mark s		
Learning 1	Ou	itcome		ain basics elopment nitive domain)	for	entre	pren	eurship	9	10
Contents			• FO C • So as (1)	 Entrepreneur / Start up, Obstacle in entrepreneurship Form of Business Organization: Sole proprietorship, Partnership Cooperation 						tnership, support for Small ther level
Method Assessme	ent	of	Intern	nal: Mid semester	theory ex	aminat	ion (F	Pen pape	r test)	
Learning 2	Οι	itcome	Forn	strate SSI Pro nulation and Ap nitive domain)		inning,	Se	lection,	9	10
Contents			• Se op	SI Project Planni f planning, Steps election: Search pportunity & Viab ormulation: Stag roject Report: Sc ppraisal: Need of	in planning of Idea/Obility asses of form ope of pro	ng pportun sment ulation ject rep	ort, o	Selection/	Short	listing of
Method Assessme	ent	of	Exterr	nal: End semeste	r theory e	xamina	tion (Pen pape	er test)).
Learning 3	Oı	itcome	give	struct to pres n/available SSI chomotor domair	[/start-u		port	for a	6	10
Contents			report • Pi	and Exercises or :: reliminary project narket feasibility, etect comm	ct report				econo	

			р	reparations/prese	entation.				
Method Assessme	ent	of	Intern	nal Practical Obse	rvation				
RGPV WING)	RGPV (DIPLOMA OBE CURRICULUM FOR THE COURSE FORMA								Sheet No. 2/5
Branch	Info	ormatio	n Tecl	hnology		Sen	nester	V	
Course Code		501		Course Name	E-Governance	and	Digital M	larketi	ng
Course C	Outco	ome -		e activities rel rnance	ated to E Co	mmer	ce & E	Teac h Hrs	Mark s
Learning 4	Out	tcome	of E	lain business m -Commerce Initive domain)	odel and payr	nent	method	9	10
Contents			di • E- • E- Pa	lectronics ComisadvantagesCommerce Busin -Commerce Payr ayment, Threatsystem -Marketplace	ness model: B2B nent: Payment	Gatew	, C2C, Foo ay, Mode	es of E	ule lectronic
Method Assessme	ent	of	Exterr	nal: End semeste	r theory examin	ation ((Pen pape	r test).	
Learning 5	Out	tcome	Gov	lain Electronic ernance basics Initive domain)	Governance	and	Mobile	6	10
Contents			P: M • E:	-Governance: In rivate Partnershin Ponline) as partesecurity and Cyll-Governance: Co	p), Visit e-gove of Tutorials ber laws		-	-	-
Method Assessme	ent	of	Intern	nal: Mid semester	theory examina	ition (Pen pape	r test).	
Learning 6	Out	tcome	and	e use of E Co E governance p chomotor domair	ortal	nent	method	6	10
Contents			• S	se Payment gat anking, UPI and I tudent will mako nstitute perform	E-wallet) on web e sure to traine	site/med/hel	nobile app p at leas	t 5 sti	udent of

				ranthalaya, MP ubmit/present re			strict)	activiti	es and		
Method Assessme	ent	of	Exterr	External: Laboratory observation and viva voce.							
RGPV WING)	вно	(DIPL	OMA OBE CURRICULUM FOR THE FORMAT COURSE				T-3	Sheet No. 3/5			
Branch	Inf	ormatio	n Tec	hnology		Sen	nester	v			
Course Code		501		Course Name	E-Governan	ce and	Digital N	1arket	ing		
Course C	Outc	ome -		ly techniques o keting	n available to	ools for	digital	Teac h Hrs	Mark s		
Learning 7	Ou	tcome		Explain fundamental of Digital Marketing (Cognitive domain) 9 10							
Contents			 Li D V V P C 	igital marketing imitation, Examp igital marketing vigital marketer: I isibility: Concept isitors Engageme age(Thank you ponverting Traffic abound Marketing	les Verses Traditio Definition, Role , Types and Ex ent: Concept , age) into Leads	nal mar ample Landin	keting g page a				
Method Assessme	ent	of	External: End semester theory examination (Pen paper test).								
Learning 8	Ou	itcome		lain types of Dig nitive domain)	gital Marketir	ıg		9	10		
• Search Engine Marketing					al Taro	geting V		havioural			
Method Assessme	ent	of	Exteri	nal: End Semeste	er theory exam	ination	(Pen pap	er test).		

Learning 9	Out	tcome	digita	use of availab al marketing nomotor domain)		echniq	ues for	6	10
Contents	 Develop a Thank you page , Landing Page Develop a campaign for Search Engine Marketing be available tool (like Google AdWords) Construct blog by using available tool (like blogger) Construct an ethical e-mail to attract customer a enterprise brand product 							er)	5
Method Assessme	ent	of	Exterr	nal: Laboratory o	bservation and	viva vo	oce.		
RGPV WING)	вно	(DIPL	АМО	OBE CURRI COURSE	CULUM FOR	THE	FORMA	T-3	Sheet No. 4/5
Branch	Info	ormatio	n Tecl	hnology		Sen	nester	v	
Course Code		501		Course Name	E-Governance	e and	Digital M	larke	ting
Course C	and techniques to improve search on web						Tead h Hrs	Mark s	
Learning 10	Out	tcome		in SEO basics litive domain)				6	10
Contents			SSSSB	earch Engine: Co earch Engine Alg EO: Need, Impor EO Terminologies earch Trends EO Working: Cra acklinks: Concep ow to Get Backlin	orithms: conceptance s : SERP, On Pa awling, Indexing t, Importance, I	et, chai ge & O i and R	racteristic ff Page, I anking	Relate	d Search,
Method Assessme	ent	of	Exterr	nal: End semeste	r theory examin	ation ((Pen pape	er test).
Learning Outcome 11 Utilize SEO guidelines for website search improvement (Cognitive domain) 6 10							10		
Contents • Understanding domain names & domain extensions • Website Structure • Iframes / frames effects on SEO • URL Rewriting Techniques (301, 302) • Measuring and Tracking - UTM(Urchin tracking module) • Keyword: Keyword Research, Types, Research Methodology									

		• O	Competition Analysis Off Page SEO: Page Rank, RSS(Rich Site Summary) Feeds Case Study on available SEO Tool (Example Google Search Console)							
Method Assessment	of	Ex	External: End semester theory examination (Pen paper test).							
Learning Outco	ome	SEO i	use of available n Web project nomotor domain)	le tools and tech	nnique of	6	10			
Contents	 Develop OnPage SEO with Title Tag, Meta Tags, Canonical Tag Header, footer, Anchor Links, image tag, Navigation Menu Filename, 404 Implementation Develop an HTML and XML sitemap Develop Robots file Develop .htaccess file Identify different "keywords" for Web Project optimization 									
Method of Internal Practical Observation Assessment										
RGPV (I WING) BHOPA	DIPL(AL	ОМА	OBE CURRI COURSE	CULUM FOR TI	HE FORMA	_	Sheet lo. 5/5			
Branch Inform	matio	n Tecl	hnology		Semester	v				
Course 50 Code	01		Course Name	E-Governance	and Digital N	1arketir	ng			
Course Outcom 5	ne -	Perfo	rm Social Medi	a Marketing Act	ivities	Teac h Hrs	Mark s			
Learning Outco	ome		ain social ninologies nitive domain)	media marko	eting and	6	10			
 Social Media: Concept, Paradigms & Psychology Social Media Marketing: Concept, Laws, Advantages Disadvantage, Strategy, Community building Platform (Eg Facebook, Linkedin, Instagram, Twitter) Difference between Social Media Optimization (SMO) and Social Media Marketing (SMM) Social Media Terminology: hashtag, trends, pin, tweet, emoji traffic 							n (Eg.			
Method Assessment	of	Exterr	nal: End semeste	er theory examina	tion (Pen pape	er test).				

Learning Outcome 14	Demonstrate digital analytical tool to monitor measure and optimize digital marketing activities on web. (Cognitive domain)	6	10			
Contents	 Web Analytics: Concept, Characteristics Traditional V/S Contemporary Web Analytics Case study on available Digital analytical too Analytics) 	ol (Eg.	Google			
Method of Assessment	nternal Term Work					
Learning Outcome 15	Develop own sample business page and post advertisement on social media (Psychomotor domain)	6	10			
Contents	 Sample business page on available social media platform (Eg. Facebook) Sample Ad Campaign on available social media plateform(Eg. Facebook, Linkedin, Instagram) with events & offer of the day likewise concepts 					
Method of Assessment	External: Laboratory observation and viva voce.					

REFERENCE BOOKS:

S No	Title & Publication	Author
1	Entrepreneurship Development - published by S Chand and Sons, New Delhi	Dr N P Srinivasan, Dr C B Gupta
2	Entrepreneurship Development	Sangeeta Sharma
3	Projects planning, analysis, selection, financing, implementation and review – published by Tata McGraw Hill	Prasanna Chandra
4	Information Technology And E-Governance – published by New Age International (P) Ltd.	N Gopalsamy
5	Fundamentals of Digital Marketing - published by Pearson.	Puneet Bhatia
6	Digital Marketing for Dummies published by Wiley	Ryan Deiss and Russ Hennesberry
7	Digital Marketing - published by Oxford Publication	Vandana Ahuja
8	Digital Marketing: From Fundamentals to Future	Swaminathan T. N and Karthik Kumar
9	https://www.javatpoint.com/digital-marketing	
10	https://www.youtube.com/user/googleanalytics	

	E-books/E-tools/Relevant software to be used as	
	recommended by AICTE/NITTTR/RGPV	

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code			ourse Code	Code	Code	Format No. 4
				0	4			1	1	
COURSE NAME	E-GOVERNANCE AND DIGITAL MARKETING									
CO Description	Utilize available resour	rces to present entrepreneurship pr	oject re	port						
LO Description	O Description Explain basics for entrepreneurship development									
SCHEME OF STUDY										

Teaching —

S. No.	Learning Content	Teaching — Learning Method	Description of T-L Process	Teac h Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	• Entrepreneur: Concept, Characteristics, Functions	Interactive	Teacher will explain	9	NIL	Handouts, chalk		
	of Entrepreneur / Start up, Obstacle in	classroom	the contents and			board, PPT, text		
	entrepreneurship	teaching,	provide handouts to			book, charts,		
	• Form of Business Organization: Sole	demonstration,	students. Teacher will			video film.		
	proprietorship, Partnership, Cooperation	quiz,	conduct assignments/					
	• Scheme of assistance by available entrepreneurial	assignments,	quiz/tutorial to make					
	support agencies, Commercial banks and financial	tutorial	students practice their					
	institutions for Small Scale Industries(SSI)/Start-		knowledge.					
	up at National, State and Other level							
	(NIESBUD,NSIC, SIDO, EGB, MSME,							
	NABARD, AIC, MPCON, SIDBI, DIC, TBI)							

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Paper pen test	Student will be asked basics of entrepreneur and go through government agencies required to set up various small scale industry / startup	10	Test paper + Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Internal: Progressive examination (Pen paper test).

RG	RGPV (Diploma Wing) Bhopal SCHE			E FOR LEARNING Branch Cod			ode	Course C	Code	CO Code	LO Code	Format No. 4	
	- · (F	··· s / r	(OUTCOME		C	0	4			1	2	
	JRSE ME	E-GOVERNANCE	AND DIGITAL	MARKETING	G								
CO Des	cription	Utilize available res	sources to preser	ıt entrepreneur	rship pro	ject re	port						
LO Desc	cription	Illustrate SSI Proje	ect Planning, Sel	ection, Formula	ation and	l Appr	aisal						
		<u> </u>			EME OI								
S. No.		Learning Conte	ent	Teaching – Learning Method		ption o		Teach Hrs.	Pract /Tut Hrs.		LRs Req	uired	Remarks
1	plann plann Plann Select Select Viab: Form Projet contect Appr	SSI Project Planning: Definition, Types of planning, Importance of planning, Steps in planning Selection: Search of Idea/Opportunity, Selection/Short listing of opportunity & Viability assessment Formulation: Stages of formulation Project Report: Scope of project report, content & format Appraisal: Need of Project Appraisal & Steps of Project Appraisal		Interactive classroom teaching, demonstratio n, quiz, assignments, tutorial	the con provide student will co assignr quiz/tu student	acher will explain e contents and ovide handouts to idents. Teacher Il conduct signments/ iz/tutorial to make idents practice eir knowledge.			NIL Handouts board, PI		andouts, chard, PPT, ok, charts, m.	text	
		• • • •		SCHEM	E OF AS	SESSI	MENT			·			
S. No.					nt	Maximum Marks Resources Required					External / Internal		
End semester theory examination End semester theory project basics				sked question on SSI			Question paper + rating scale						
	<u> </u>		ADDITIONAL	INSTRUCTIO	NS FOR	THE	HOD/	FACULT	Y (IF AN	Y)			1
					NIL				<u> </u>				

RGPV (D	iploma Wing) Bhopal	SCHEME FOR LEAD	RNING Branch	1 Code	Course Code	e CO Code	LO Code	Format No. 4
	8)	OUTCOME	$C \qquad \qquad \theta$	4		1	3	
COURSE NAME E-GOVERNANCE AND DIGITAL MARKETING								
CO Descriptio	on Utilize available resour	rces to present entreprene	urship project repor	t				
LO Descriptio	on Construct to present p	roject report for a given/a	vailable SSI/start-up)				
		SC	HEME OF STUDY					
Teaching – Learning Content Teaching – Learning Description of T-L Teach Pract. /Tut Learning Description of T-L								Domarks

S. No.	Learning Content	Teaching — Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	 Steps and Exercises on preparation and presentation of project report: Preliminary project report including technical, economic and market feasibility, Detect common errors in project report preparations /presentation. 	demonstration, quiz,	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.	NIL	6	Handouts, chalk board, PPT, text book, charts, video film.	

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Practical Observation Practical Assignment/Quiz	Student will be asked to prepare and present project report after visit of SSI/Startup in nearby area	10	Observation schedule/check-list /rating scales /rubrics/Quiz	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Teachers instruct/encourage student to visit local small scale enterprise/incubation centre to come up with an idea for developing startup with project report

RGPV (Diploma Wing) Bhopal		ma Wing) Bhopal		E FOR LEAR OUTCOME	NING		anch C	ode	C	ourse Co	ode	CO Code	LO Code	Format No. 4
						<i>C</i>	0	4				2	1	
COU NA	JRSE ME	E-GOVERNANCE	AND DIGITAL	L MARKETIN	\mathbf{G}									
CO Desc	cription	Utilize activities rel	ated to E Comn	nerce & E Gov	ernance									
LO Desc	cription	Explain business m	odel and payme	nt method of E	E-Commo	erce								
	'			SCH	IEME O	F STU	DY							
S. No.		Learning Conte	nt	Teaching – Learning Method		scription of T-L Process		Teac Hrs		Pract. /Tut Hrs.	,	LRs Req	uired	Remarks
1	 Electronics Commerce: Introduction, advantages and disadvantages. E-Commerce Business model: B2B, B2C, C2C, Four C's rule E-Commerce Payment: Payment Gateway, Modes of Electronic Payment, Threats & protections for e-commerce payment system E-Marketplace 		Interactive classroom teaching, demonstratio n, quiz, assignments, tutorial	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students practice their knowledge.		9	9 NIL		bo bo	Handouts, chalk board, PPT, text book, charts, video film.				
'				SCHEM	IE OF A	SSESS	MENT							·
S. No.	Method of Assessment Description of Assessment				nt	Maximum Marks			Resources Required					External / Internal
End semester theory examination End semester theory Commerce				asked question on E		10		Question paper + rating		rating scal	e	External		
			ADDITIONAL	INSTRUCTIO	ONS FOI	R THE	HOD/	FACUL	TY (IF ANY)			1
					NIL	,				•	-			

RG	PV (Diplo	oma Wing) Bhopal	SCHEME FOI		Branch C 0	ranch Code		urse Code	CO Code	LO Code	Format No. 4
	URSE ME	E-GOVERNANCE ANI	D DIGITAL MAI	RKETING			4		2		
CO Des	cription	Utilize activities related	to E Commerce	& E Governance							
LO Des	cription	Explain Electronic Gove	ernance and Mob	ile Governance b	asics						
				SCHEME O	F STUDY						
S. No.	I	Learning Content	Teaching – Learning Method	Description of Process		ach rs.	Pract. /Tut Hrs.	LRs Rec	quired		Remarks
1 • E-Governance: Introduction, Models, lifecycle, PPP (Public Private Partnership), Visit e-			Teacher will exp the contents and provide handouts		6	NIL	Handouts, cl PPT, text bo video film.		1		

students. Teacher will

conduct assignments/

quiz/tutorial to make

students practice their

knowledge.

sites

MPESeva, MPOnline) as part quiz,

governance

of Tutorials

• E-Security and Cyber laws

M-Governance: Concept

(Eg.

demonstration,

assignments,

tutorial

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Paper pen test	Student will be asked basics of e-gov and m-gov	10	Test paper + Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Internal: Progressive examination (Pen paper test).

RG	PV (Diplo	ma Wing) Bhopal	· · ·	FOR LEARNING	Bı	anch (Code	Co	ourse Co	de	CO Code	LO Code	Format No. 4	
	· (F	8/	Ot	UTCOME	\boldsymbol{C}	0	4				2	3		
	URSE ME	E-GOVERNANCE	AND DIGITAL N	MARKETING										
CO Des	cription	Utilize activities rel	ated to E Comme	rce & E Governance										
LO Des	cription	Make use of E Com	merce payment m	nethod and E govern	ance p	ortal								
	·			SCHEME O	F STU	DY								
S. No.		Learning Cont	ent	Teaching –Learni Method	ng	-	ption of Process	T-L	Teacl Hrs.		Pract. /Tut Hrs.	LR Requi	Ramar	
1	 Use Payment gateway method (Credit card, Debit card, Net banking, UPI and E-wallet) on website/mobile app Student will make sure to trained/help at least 5 student of institute performing E-governance portal(e-scholarship, e-granthalaya, MPOnline, mpedistrict) activities and submit/present report for evaluation 		Interactive lab classroom teaching, demonstration, quiz assignments, tutorial	de de la st pri as te	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.			major inside the nts, l practice, z, etc., conduct		6	Handor chalk board, PPT, te book, charts, video f	ext		
	ı			SCHEME OF A	SSESS	MENT	Γ							
S. No.	Metho	d of Assessment	Description	of Assessment		kimum arks			Resource	es Re	equired		External / Internal	
1		oratory test by observation	of self using and h	e whom they helped		10	О	Observation schedule/check-list /rating scales /rubrics				External		
				ance portal NSTRUCTIONS FO	R THE	HOD	/ FACU	LTY (IF ANY)					

Teacher will ensure every student guide/help at least 5 students of other branch of institute in using E governance portal(MPOnline, Scholarship or other)

RGPV (Dipl	oma Wing) Bhopal	SCHEME FOR LEARNING	Br	anch (Code	Co	urse C	ode	CO Code	LO Code	Format No. 4
	6/ · · · · ·	OUTCOME		0	4				3	1	
COURSE NAME	FCOVERNANCE AND DICTIAL MARKETING										
CO Description Apply techniques on available tools for digital marketing											
LO Description	O Description Explain fundamental of Digital Marketing										
		SCHEME O	F STU	DY							
		Tagahing									

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	• Digital marketing : Concept, Process		Teacher will explain	9	NIL	Handouts, chalk	
	Application, Advantages, Limitation, Examples	classroom	the contents and			board, PPT, text	
	• Digital marketing Verses Traditional marketing	teaching,	provide handouts to			book, charts,	
	 Digital marketer: Definition, Role 	demonstration	students. Teacher will			video film.	
	 Visibility: Concept, Types and Example 	, quiz,	conduct assignments/				
	• Visitors Engagement: Concept, Landing page	assignments,	quiz/tutorial to make				
	and Conversion Page(Thank you page)	tutorial	students practice their				
	 Converting Traffic into Leads 		knowledge.				
	 Inbound Marketing and Outbound Marketing 						

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	End semester theory examination	Student will be asked question on digital marketing fundamental	10	Question paper + rating scale	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

NIL

RG	PV (Diplo	ma Wing) Bhopal	SCHE	ME FOR LEARN	NING	Br	anch C	ode	C	ourse C	ode	CO Code	LO Code	Format No. 4
	` 1	87 1		OUTCOME		C	0	4				3	2	
COU NA	IRSE ME	E-GOVERNANCE	AND DIGITA	AL MARKETING	G									
CO Desc	cription	Apply techniques of	n available to	ols for digital ma	rketing									
O Desc	cription	Explain types of Di	gital Marketii	ng										
		<u> </u>		SCH	EME O	F STU	DY							
S. No.		Learning Conten	t	Teaching – Learning Method	Desc	ription Proces			each Hrs.	Pra /Tut		LRs R	equired	Remarks
1	 Search Engine Marketing Search Engine Marketing Search Engine Optimization(SEO) PPC(Pay Per Click) Social Media Marketing Display Advertising: Context Targeting Vs Behavioral Targeting Content Marketing & Blogging Email Marketing- Email Ethi Webmail, Bulk Email Mobile marketing – Eg. Bulk SMS Affiliate marketing Video Marketing 			Interactive classroom teaching, demonstration, quiz, assignments, tutorial	the co provide student condu quiz/tu student	Teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/quiz/tutorial to make students practice their knowledge.			9	NIL		Handout board, Pl book, ch film.		
				SCHEM	E OF A	SSESS	MENT	1						
S. No.	Metho	od of Assessment	Descrip	tion of Assessmer	nt		imum arks			Resour	ces R	equired		External / Internal
1		semester theory	Student will by types of digital	oe asked question of al marketing	on		10		Question paper + rating scale				External	
			ADDITIONA	L INSTRUCTIO	NS FO	R THE	HOD/	FACU	JLTY (IF ANY	7)			

RG	PV (Diplo	ma Wing) Bhopal	SCHI	EME FOR LEAR	NING	Br	anch (Code	Co	urse Co	de	CO Code	LO Code	Format No. 4
	\ 1	87 1		OUTCOME		C	0	4				3	3	
	JRSE ME	E-GOVERNANCI	E AND DIGIT	TAL MARKETIN	G				'			'		
CO Des	cription	Apply techniques	on available to	ools for digital ma	rketing									
LO Des	cription	Make use of availa	ble tools and	techniques for dig	ital mar	keting								
	'			SCH	EME O	F STU	DY							
S. No.		Learning Conte	ıt	Teaching – Learning Method	Des	criptio Proc		·L	Teach Hrs.	Prac /Tu Hrs	t	LRs Re	equired	Remarks
1	 Develop a Thank you page, Landing Page Develop a campaign for Search Engine Marketing by using of available tool (like Google AdWords) Construct blog by using available tool (like blogger) Construct an ethical e-mail to attract customer about your enterprise brand product 		Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.			ents e .,	NIL	6		Handouts, board, PP' book, char film.			
				SCHEM	E OF A	SSESS	MENT	-						
S. No.	Metho	d of Assessment	Descrip	ption of Assessmen	nt		imum arks]	Resourc	es R	equired		External / Internal
1		oratory test by observation		be asked to develo or campaign by us ol.	•		10		Observati	ion sche		check-list	rating/	External
			ADDITION	AL INSTRUCTIO	NS FO	R THE	HOD/	FAC	ULTY (I	F ANY)			
					NII				<u> </u>					

RG	PV (Diplon	na Wing) Bhopal	SCHEME FOR OUTCO		Br	anch (Code	C	ourse Co	de	CO Code	LO Code	Format No. 4
			OUTCO)NIE.	\boldsymbol{C}	0	4				4	1	
COU NA	JRSE ME	E-GOVERNANCE	AND DIGITAL MARI	KETING									
CO Desc	cription	Apply SEO(Search	Engine Optimization)	tools and techni	ques to	o impr	ove sea	rch on	web				
LO Desc	cription	Explain SEO basics	S										
				SCHEME O	F STU	DY							
S. No.		Learning Co	ontent	Teaching – Learning Method]		ption of Process	f T-L	Teach Hrs.		act. Hrs.	LRs Requir	ed Remark
1	 Search character SEO: 1 SEO TRelate SEO V Backlith Nofoll 	Engine A teristics Need, Importance Ferminologies: SER d Search, Search Tro Vorking: Crawling, nks: Concept, Imp	mportance, Working lgorithms: concept, P, On Page & Off Page, ends Indexing and Ranking portance, Dofollow &	Interactive classroom teaching, demonstration, quiz, assignments, tutorial	th pr str cc qu	e conte covide l udents. onduct uiz/tuto	will expents and handout Teache assignmorial to reactice ge.	es to er will nents/ nake	6	N		Handouts chalk boa PPT, text book, cha video film	rts,
			S	CHEME OF A	SSESS	MEN	Γ						
S. No.	Method	of Assessment	Description of As	sessment		arks			Resourc	es Req	uired		External / Internal
1		emester theory amination	Student will be asked question SEO	uestion on		10		Que	estion pap	er + ra	ting sca	ale	External
			ADDITIONAL INSTR	UCTIONS FO	R THE	HOD	/ FACU	JLTY (IF ANY)				
				NII									

RG	PV (Diplo	ma Wing) Bhopal	SCHEME FOR LEARN OUTCOME	ING	Br	anch (Code	Cou	rse Code	CO Code	LO Code	Format No. 4
	` •	•	OUTCOME		<i>C</i>	0	4			4	2	
	JRSE ME	E-GOVERNANCE	AND DIGITAL MARKETING	j						·		
CO Des	cription	Apply SEO(Search	Engine Optimization) tools and	l techni	ques to	impr	ove sea	rch on w	eb			
LO Des	cription	Utilize SEO guideli	nes for website search improve	ment								
			SCHI	еме о	F STU	DY						
S. No.		Learnin	g Content	Lea	ching – rning ethod	De		on of T-L cess	Teach Hrs.	Pract. /Tut Hrs.	LR Requ	Remarks
1	 Webs Ifram URL Meas Keyv Meth Off I Feeds Case 	site Structure les / frames effects on Rewriting Technique suring and Tracking - vord: Keyword odology, Competition Page SEO: Page R	UTM(Urchin tracking module) Research, Types, Research	Interactive classroom explain the contents teaching, demonstration search mary) Method Interactive classroom explain the contents teacher will explain the contents and provide handouts to students. Teacher will conduct assignments/ quiz/tutorial to make students					Hando chalk board, PPT, to book, charts, video f	ext		
			SCHEMI	E OF A	SSESS	MENT	Γ					
S. No.	Metho	od of Assessment	Description of Assessmen	t		imum ırks		R	esources	Required		External / Internal
1		semester theory examination	Student will be asked question of SEO guideline and technique	n		0		Quest	on paper	+ rating scal	e	External
	I		ADDITIONAL INSTRUCTIO	NS FOI	R THE	HOD	FACU	LTY (IF	ANY)			I
				NII								

RG	PV (Diplor	na Wing) Bhopal	SC	HEME FOR LEAR! OUTCOME	NING		anch			Course C	ode	CO Code	LO Code	Format No. 4
	JRSE	E-GOVERNANCE	AND DIG	GITAL MARKETIN	G	<i>C</i>	0	4				4	3	
	ME													
	-	- · · · · · · · · · · · · · · · · · · ·		ptimization) tools an		-		ove se	arch	on web				
LO Des	cription	Make use of availal	ble tools ar	nd technique of SEO	in Web	project	ţ							
				SCH	EME O	F STU	DΥ							
S. No.		Learning Content		Teaching – Learning Method		iption o Process			ach rs.	Pract. /7 Hrs.	Γut	LRs Red	quired	Remarks
1	Tag, Headd image Filena Devel sitema Devel Devel	op OnPage SEO we Meta Tags, Canon et, footer, Anchor tag, Navigation ame, 404 Implementation and HTML are op Robots file op htaccess file fy different "keyweroject optimization"	nical Tag, or Links, Menu , ation nd XML	Interactive lab classroom teaching, demonstration, quiz, assignments, tutorial	demon compo the lab student practic quiz, a etc., tea conduc	Process Teacher will demonstrate major components inside the lab to students, students will practice, provide quiz, assignment etc., teacher will conduct remedial and tutorials.		N	IL	6		Handouts, chalk board, PPT, text book, charts, video film.		
				SCHEM	E OF A	SSESS	MEN	Γ						
S. No.	Metho	d of Assessment	Desc	cription of Assessmen	nt		imum ırks			Resour	ces R	equired		External / Internal
1	0	rnal Practical bservation Assignment/Quiz		evelop the web page/p SEO guidelines	oroject	1	.0	(Observation schedule/check-list /rating scales /rubrics				rating	Internal
			ADDITIO	ONAL INSTRUCTION	ONS FO	R THE	HOD	/ FAC	ULT	Y (IF ANY	Z)			1
					NII									

RG	PV (Diplo	oma Wing) Bhopal	SCH	EME FOR LEAR	NING	Br	anch (Code		Course Co	de	CO Code	LO Code	Format No. 4
		8)		OUTCOME		C	0	4				5	1	
	JRSE ME	E-GOVERNANCE	AND DIGI	TAL MARKETIN	I G					'		'	'	
CO Des	cription	Perform Social Med	dia Marketi	ng Activities										
LO Des	cription	Explain social medi	ia marketing	g and terminologie	es									
				SCH	HEME O	F STU	DY							
S. No.		Learning Content		Teaching – Learning Method		iption Proces			-	Pract. /'		LRs F	Required	Remark
1	Psyc Soci Law Strat Platt Insta Diff Opti Med Soci	al Media: Concept, P chology al Media Marketing s, Advantages, Di tegy, Community form (Eg. Facebook agram, Twitter) erence between Soo mization (SMO) a ia Marketing (SMM) al Media Terminolog ds, pin, tweet, emoji, to	g: Concept, sadvantage, building , Linkedin, cial Media and Social gy: hashtag,	Method digms & Interactive classroom the contents and teaching, demonstration, quiz, assignments, tutorial Method Teacher will explain the contents and provide handouts to demonstration, quiz, assignments, tutorial Teacher will explain the contents and provide handouts to demonstration, quiz, conduct assignments/ quiz/tutorial to make tutorial Media Social Hrs. Hrs. Handouts, chalk board, PPT, text book, charts, vide film.		T, text								
				SCHEM	IE OF A	SSESS	MEN	Γ						
S. No.	Meth	od of Assessment	Descr	iption of Assessme	ent		imum arks			Resourc	es Ro	equired		External / Internal
1		semester theory examination		l be asked question a marketing	on		10		Qı	uestion pap	per +	rating scal	e	External
	<u> </u>		ADDITION	NAL INSTRUCTION	ONS FO	R THE	HOD	/ FACU	LTY	(IF ANY)			I
					NII	- -								

RG	SPV (Diplo	oma Wing) Bhopal	SCHEME FOI	–	Branch Co	ode Co	urse Code	CO Code	LO Code	Format No. 4
		3 , 1	OUTC	OME	$C \mid 0 \mid$	4		5	2	
	URSE AME	E-GOVERNANC	E AND DIGITAL MAI	RKETING		'			,	
CO Des	scription	Perform Social M	edia Marketing activiti	es						
LO Des	cription	Demonstrate digi	al analytical tool to mo	nitor measure and	optimize digi	ital marketin	g activities on	web		
				SCHEME OF	STUDY					
	_		Teaching –Learning	Description of T		Pract.	LRs Red	uired		Remarks
S. No.	Lea	rning Content	Method	Process	Hrs.	/Tut Hrs.	1	•		
S. No.	• Web	Analytics:	Interactive classroom	Teacher will expla		NIL	Handouts, ch	alk board	1	
	• Web	Analytics:	Interactive classroom teaching,	Teacher will expla the contents and	in 6		Handouts, ch	alk board	1	
	• Web	Analytics:	Interactive classroom	Teacher will expla the contents and provide handouts t	in 6		Handouts, ch	alk board	1	
	• Web Cone Char	Analytics:	Interactive classroom teaching,	Teacher will expla the contents and	in 6		Handouts, ch	alk board	1	

quiz/tutorial to make

students practice their

knowledge.

Analytics

available

• Case

study

analytical tool (Eg. Google Analytics)

on Digital

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Term Work Assignment/Quiz	Student will be asked about Web/Digital analytical tools	10	Test paper + Rating scale	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

Internal: Progressive examination (Pen paper test).

RG	PV (Diplo	oma Wing) Bhopal	SCHEME FOI		Bı	anch C	ode	Co	ourse C	ode	CO Code	LO Code	Format No. 4
	` 1	87 1	OUTC	OME	C	0	4				5	3	
	JRSE ME	E-GOVERNANC	E AND DIGITAL MAI	RKETING									
CO Des	cription	Perform Social M	edia Marketing activiti	es									
LO Desc	cription	Develop own samp	ple business page and p	ost advertisemen	t on so	cial me	dia						
				SCHEME O	F STU	DY							
S. No.	Lea	rning Content	Teaching –Learning Method	Description of Process	T-L	Teach Hrs.		ract. t Hrs.	L	Rs Re	quired		Remarks
1	on med Face on med Face Insta	ple business page available social ia platform (Eg. ebook) ple Ad Campaign available social ia platform(Eg. ebook, Linkedin, agram) with events offer of the day wise concepts	ess page Interactive lab classroom teaching, demonstrate response tutorial social form (Eg. Linkedin, the levents the lab to students will cremedial and tutorials.			NIL		6 Handouts, ch PPT, text bo- video film.				·	
				SCHEME OF A	SSESS	MENT						·	
S. No.	Meth	od of Assessment	Description of A	Assessment		kimum arks]	Resour	ces Re	quired		External / Internal
1		poratory test by observation	Student will be asked business pages and car social media platform	mpaign on		10	Ot	oservat		edule/c es /rubi	heck-list	rating/	External
			ADDITIONAL INST	RUCTIONS FO	R THE	HOD/	FACU.	LTY (IF ANY	<i>(</i>)			
				NII						-			

RGPV (DIPLO WING) BHOP		OBE CURRICULUM FOR Computer Graphics and Animation Technology	FORMAT-	Sheet No. 1/4	
Branch		Computer Science and Engineering	Semester	VI	
Course Code		Course Name	Computer Graphic and Animation Technology		
Course Outcome 1	Expla	ain the concept of Computer Graphics and their algorithms.	Hrs	Marks	
Learning Outcome	Under	estand Basics of Computer Graphics	06	10	
Contents		tion of Computer Graphics, Application of Computics Hardware, Overview of Display Devices, Rasns.	-	om Scan	
Method of Assessment		Question Paper -External- RGPV End Sem T	heory Exam	1	
Learning Outcome 2	Classi	fy Line-drawing Algorithms.	09	10	
Contents	Points Algori	and Lines,Line-drawing Algorithms, DDA Algorithm	thm , Bresenh	nam's line	
Method of Assessment		Internal Lab Test Practical Observa	tion.		
Learning Outcome 3	Demo	nstrate 2D and 3D Transformations.	06	10	
Contents	Transl	ation, Rotation, Scaling, Shear, Reflection.			
Method of Assessment		Question Paper-Internal Progressive	Γest-I		
Course Outcome 2		orate Clipping, Projection, Shading, Colour el and Illumination	Hrs	Marks	
Learning Outcome	Identi	fy Clipping Algorithm.	06	10	
Contents		Clipping, Line Clipping -Cohen-Sutherland Clippin ng: Sutherland Hodgeman Algorithm	g algorithm.,F	olygon	
Method of Assessment		Question Paper-Internal Progressive T	Cest-II		
Learning Outcome 5	Comp	are Various Projection Techniques in detail.	06	10	

	Parallel Projection: Orthographic, Axonometric, Oblique								
Contents	Perspective Projection: Standard Perspective Projection, C Perspective Projection, Vanishing Points	General							
	r erspective r rojection, vanishing r omts								
Method of Assessment	Question Paper -External- RGPV End Sem Th	eory Exam	2						
Learning Outcome 6	Organize Shading and Colour model in detail.	06	10						
	Chromaticity diagram-RGB, CMY, HSV, HLS		•						
Contents	Illumination models, shading models for polygons, Goura	ud and Phot	ng shading						
Method of Assessment	Question Paper -External- RGPV End Sem Th	neory Exam	3						
Course Outcome 3	Illustrate Fundamental Multimedia Technology and Graphics Image File Formats. Hrs								
Learning Outcome 7	Explain Fundamental Multimedia Technology.	06	10						
Contents	Concepts of Multimedia: Types, Hardware and Softw Applications, Multimedia Authoring and their tool, MII Hardware and Software.	-							
Method of Assessment	Question Paper -External- RGPV End Sem Th	eory Exam	4						
Learning Outcome 8	Discuss Over view of Types of compression.	06	10						
Contents	Over view of Types of compression Technique(Lossy and I Video Compression, MPEG and JPEG Compression Basic Hypertext and Hypermedia.								
Method of Assessment	Internal –Term Work Assignment	•							
Learning Outcome 9	_ 00								
Contents	Raster Format, Bitmap (BMP) Format, Graphics Intercha Joint Photographic Experts Group (JP EG), Tagged Image Portable Network Graphics (PN G) and their differences	_	` //						
Method of Assessment	Question Paper -External- RGPV End Sem Th	neory Exam	.5						
Course Outcome 4	Illustrate fundamental of animation and their technology.	r Hrs	Marks						

Learning Outcome 10	Understand the need of Animation.	06	10
Contents	Principles of Animation, characteristics of animation. Animation, limitation of animation.	ns, Applica	ations of
Method of Assessment	Question Paper -External- RGPV End Sem The	eory Exam (6
Learning Outcome	Classify various animation techniques.	06	10
Contents	Types of animation: Traditional Animation, 2D animamotion graphics, and stop motion animation, text animation	•	nimation,
Method of Assessment	Question Paper -External- RGPV End Sem The	eory Exam '	7
Learning Outcome 12	Make use of various techniques for animation.	09	10
Contents	Animation techniques: techniques to create animation, Key Timeline, Deformations, Character Animation, Physics-Ba Procedural Techniques, Groups of Objects.	•	•
Method of Assessment	Internal Lab Test Practical Observati	on.	
Course Outcome 5	Develop 2D animation applications.	Hrs	Marks
Learning Outcome 13	Select software for computer animation.	09	10
Contents	 2D animation software, 2D Animation- introduction Flash, Animaker, pencil2d, CrazyTalk Animator, fli 3D Animation- Introduction to blender- work envir 	pbook.	al Studio
Method of Assessment	External Lab Test Observation		
Learning Outcome 14	Apply 2D computer animation techniques	09	10
Contents	Flash Basics: Flash Work Flow, Animation Using Flash. The Flash Work Environment: The Stage and the Time Instances, Symbols and Interactive Movies, Using the Working the Frames using time line.		
Method of Assessment	External Lab Test Observation		

Learning Outcome 15	Create 2D computer animation application.	09	10					
Contents	Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates, and Steps for creating animations. Frame by Frame Animations.							
Method of Assessment	External Lab Test Observation							

PRACTICAL FOR ANIMATION:

- 1. Write a program for 2D line drawing using DDA Algorithm.
- 2. Write a program for 2D line drawing using Brsenham's Algorithm.
- 3. Create animations using Adobe FLASH. Flash Drawing and Painting Tools. Flash Drawing Modes. Pencil Tools.
- 4. Importing artwork into Flash.
- 5. Perform smiling face/Angry face animation using flash.
- **6.** Draw the moving Car/Bike/Cycle on the screen.

BOOKS RECOMMANDED.

- Computer Graphics, Multimedia and Animations by Malay K. Pakhira, PHI Learning.
- Computer Graphics by Donald Hearn and M. Pauline Baker, PHI
- Computer Graphics Principles and Practices second edition by James D. Foley, Andeies van Dam, Stevan K. Feiner and Johb F. Hughes, 2000, Addition Wesley.
- https://www.technicalcube.in/animation-book-pdf-download
- Introduction to Computer Graphics By N. Krishnamurthy T.M.H
- Graphics, GUI, Games & Multimedia Projects in C by Pilania & Mahendra, Standard Pub
- Newman W.M. and Sproull R.F., "Principles of Interactive Computer Graphics", Second Edition, *Tata McGraw Hill Publishing Company Limited, New Delhi*,
- Multimed ia on the PC, Sinclair,BPB
- Multimedia in Practice by Jeff coate Judith, 1, PHI.
- Multimedia Systems by Koegel, AWL
- Multimedia Making it Work by Vaughar, etl
- Principles of Multimedia by Ranjan Parekh, *Tata McGraw Hill Education Private Limited*, New Delhi.

DCD//	(Dinlon	na Wing) Bhopal	SCH	EME FOR LEAR	NING	Bra	nch C	ode	Co	urse C	ode	CO Code	LO Code	<i>1</i>
NGFV	(Dipion	ila Willig / Billopai		OUTCOME		С	0	4				1	1	Format No.
Course	Name		CC	OMPUTER GRAPH	HICS AN	D AN	IMA'	TION	TEC	CHNC	LOG	SY		
CO Des	cription	Explain the concept o	f Compu	ter Graphics and th	ieir algor	ithms	•							
LO Description Understand Basics of Computer Graphics.														
				SCHEME	OF STU	DY								
S. No.	Learning	g Content		Teaching – Learning Method	Descript Process	ption of T-L s		Tead Hrs.		Prac Tut.	•	LRs Ro	equired	Remarks
1	App • Grap Disp	inition of Computer Graphics, blication of Computer Graphics, phics Hardware, Overview of play Devices, Raster and dom Scans Systems.		Traditional Lecture method + Handout	Teacher explain contents provide students	nin the ents and ide handout to		(5	(0	Hando Books Conte	s / E-	NIL
				SCHEME OF	ASSESS	MEN	Т							
S. No.	Method	I of Assessment Descript		tion of Assessment		ximuı 1arks	m	F	Resou	ırces	Requi	red	External / Interna	
			ORY EXAM Question Paper .			10		Test Paper]		External	

DCD!	//Dialo	ma Mina \ Dhanal	SCHEME FOR LEAF	RNING	Bran	nch Co	ode	Cour	se Code	CO Code	LO Code	
KGP	טוקוט) א	ma Wing) Bhopal	OUTCOME		С	0	4			1	2	Format No. 4
Course	Name		COMPUTER GRAP	HICS AN	ID ANI	MA	ΓΙΟΝ Ί	ECH	NOLO(GY		
CO Des	cription	Explain the concept of	f Computer Graphics and t	heir algo	rithms.							
LO Des	cription	Classify Line-drawing	g Algorithms.									
			SCHEM	E OF STU	JDY							
S. No. Learning Content Teaching — Learning Meth				Descrip		T-L	Teach Hrs.		Pract./ Tut. Hrs	LRs R	equire	d Remarks
1	Points and Lines,Line-drawing Algorithms, DDA Algorithm,Bresenham's line Algorithm.		Traditional Lecture method + Handout	od + explain the contents and				0	Handouts / Books / E- Contents,		Teacher may use working animation for Searching techniques	
			SCHEME O	F ASSESS	SMENT	-						
S. No.	Method	of Assessment	Description of Assessment		aximum Marks	1	Re	sour	es Requ	iired	Ext	ernal / Internal
1	LAB W	Student will be asked towrite program for line drawing algorithm.			10) Lab Test Inter					Internal	
		ADDI	TIONAL INSTRUCTIONS	FOR THE	HOD/	'FAC	CULTY	(IF A	NY)			

BCD/	//Diplo	ma Wing) Bhopal	SCHE	ME FOR LEAR	NING	Brar	nch Co	de	Course Co		CO Code	LO Code	Format No.	
NOF	v (Dipio	ilia wilig / bilopai		OUTCOME		С	0	4			1	3	Format No.	
Course	Name		CO	MPUTER GRAPI	HICS AN	D ANI	MAT	TION T	ECHN	OLOG	GY			
CO Des	cription	Explain the concept of	f Compute	er Graphics and th	neir algor	ithms.								
LO Description Demonstrate 2D and 3D Transformations.														
				SCHEME	OF STU	DY								
S. No.	Learning	g Content	1	Teaching – Learning Method	Descript Process	ion of	T-L	Teach Hrs.		ct./ t. Hrs	LRs R	equired	Remarks	
1		Translation, Rotation, Scaling, Shear, Reflection.		Traditional Lecture method + Handout	Teacher explain contents provide students	the and hando	ut to	6	Boo		Hande Books Conte	s / E-	NIL	
				SCHEME OF	ASSESS	MENT	Γ							
S. No.	Method	d of Assessment Description of Assessment				ximun 1arks	1	Res	ources	Requ	ired	ed External / Interna		
1	PROGR	RESSIVE TEST-I	perform T	vill be asked to Franslation, Scaling, Shear, n.		10	0 Test Paper/Qu				iz Interna		Internal	

DCD\/	(Diplos	na Wing) Bhopal	SCF	IEME FOR LEAR	NING	Bran	ch Co	ode	Со	urse Co	de	CO Code	LO Code	/
NGPV	וטוקוטו	ia wilig j bilopai		OUTCOME		С	0	4				2	4	Format No.
Course	Name		C	OMPUTER GRAPH	IICS AN	D ANI	MAT	ΓΙΟΝ	TEC	CHNOI	LOG	Y		
CO Des	cription	Elaborate Clipping, P	Projection	n, Shading, Colour	model ar	d Illuı	mina	tion.						
LO Description Identify Clipping Algorithm.														
				SCHEME	OF STU	DY								
S. No.	Learning	g Content		Teaching – Learning Method	Descript Process	ion of	T-L	Teac Hrs.	h	Pract Tut. H	•	LRs Re	equired	Remarks
1	Coh algo	tt Clipping, Line C lipping en-Sutherland C lipping rithm., Polygon C lipping erland Hodgeman Algor	g:	Traditional Lecture method + Handout	Teacher explain contents provide students	the and handou	ıt to	6		0		Hando Books Conte	s / E-	NIL
				SCHEME OF	ASSESS	MENT	•							
S. No.	Method of Assessment Descri		Descrip	tion of Assessment	_	ximum 1arks)	Resources Requi		equi	ired Exter		rnal / Internal	
1	PROGRESSIVE TEST-II Student will be asked toclipping on given coordinates.			ng on given		10			T	Test Pa	per			Internal

DCD/	//Diplo	ma Wing \ Phonal	SCI	HEME FOR LEAR	NING	Bra	anch C	ode	Со	urse C	ode	CO Code	LO Code		
KGP	טוקוט) ע	ma Wing) Bhopal		OUTCOME		С	0	4				2	5	Format No.4	
Course	Name		C	COMPUTER GRAPHICS AND ANIMATION TECHNOLOGY											
CO Des	cription	Elaborate Clipping, P	rojectio	on, Shading, Colour	model a	nd Ill	umin	ation.							
LO Des	cription	Compare Various Pro	Techniques in detail	•											
				SCHEME	OF STU	DY									
S. No.	Learning	g Content		Teaching – Learning Method	Descrip Process		f T-L	Tea Hrs		Prac Tut.	-	LRs R	equired	Remarks	
1	• Pers	allel Projection: Orthographic, conometric, Oblique spective Projection: Standard spective Projection, General spective Projection ,Vanishing onts		Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.			6		0	Hande Books Conte	s / E-	NIL		
				SCHEME OF	ASSESS	MEN	Т								
S. No.	Method	of Assessment	Descri	otion of Assessment		aximu Marks	m		Reso	urces	Requi	red	Exte	ernal / Internal	
1	END SE	CM THEORY EXAM	toperfo	t will be asked orm various projection en coordinates.	m various projection 10				Test Paper				External		
		ADDI	TIONA	L INSTRUCTIONS F	OR THE	HOD	/ FA	CULT	Y (IF	ANY)				
RGPV	(Diplon	na Wing) Bhopal	SCI	HEME FOR LEAR OUTCOME	NING	Bra	anch C	Code	Со	ourse C	ode	CO Code	LO Code	Format No. 4	
Course	Name		C	OMPUTER GRAPH	IICS AN				TE(CHNC	LOG		3		

CO Description	Elaborate Clipping, Projection, Shading, Colour model and Illumination.
LO Description	Organize Shading and Color model in detail.

SCHEME OF STUDY

S. No.	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract./ Tut. Hrs	LRs Required	Remarks
1	 Chromaticity dia gram- RGB, CMY, HSV, HLS Illumination models, shading models for polygons, GouraudandPhong shading. 	Traditional Lecture method + Handout	Teacher will explain the contents and provide handout to students.	6	0	Handouts / Books / E- Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	END SEM THEORY EXAM	Student will be asked to define NLP and various techniques used in NLP.	10	Test Paper	External

PCD)	V (Diplo	ma Wing) Bhopal	SCI	HEME FOR LEAR	NING	Bra	nch C	ode	Co	ourse C	ode	CO Code	LO Code	
NOF	v (Dipio	ilia Willg / Bilopai		OUTCOME		С	0	4				3	7	Format No.
Course	Name		C	OMPUTER GRAPI	HICS AN	D AN	IMA	TION	TE	CHNC	LOC	GY		
CO Des	scription	Illustrate Fundamenta	ıl Multi	media Technology a	nd Grapl	nics Ir	mage	File 1	Form	ats.				
LO Des	cription	Explain Fundamental	Multin	nedia Technology.										
				SCHEME	OF STU	DY								
S. No.	Learning	g Content		Teaching – Learning Method	Descript Process		f T-L	Tea	_	Prac Tut.	t./ Hrs	LRs Ro	equired	Remarks
1	Hard Req Mul tool,	cepts of Multimedia: Typ lware and Software uirements and Applicatio timedia Authoring and th MIDI File Formats, MII lware and Software.	ns, eir	Traditional Lecture method + Handout	Teacher explain contents provide students	the and hando	out to		6		0	Hando Books Conte	s / E-	NIL
				SCHEME OF	ASSESS	MEN	Т							
S. No.	Method	of Assessment	Descrip	otion of Assessment	_	ximuı ⁄larks	m		Reso	urces	Requi	ired	Exte	rnal / Interna
END SEM THEORY EXAM expla and S and A				tudent will be asked to splain Types, Hardware and Software Requirements and Applications, Iultimedia.				Гest Р	aper			Internal		

DCD/	//Diplo	ma Wing) Bhopal	SCH	EME FOR LEAR	NING	Bra	nch C	ode	Со	urse Co	ode	CO Code	LO Code			
NGP	טואוט) א	ilia wilig <i>j</i> bilopal		OUTCOME		С	0	4				3	8	Format No.4		
Course	Name		CO	OMPUTER GRAPH	HICS AN	D AN	IMA'	TION	TEC	CHNO	LOG	Ϋ́				
CO Des	cription	Illustrate Fundamenta	al Multin	nedia Technology a	nd Grapl	nics Ir	nage	File F	'orma	ats.						
LO Des	cription	Discuss Over view of	Types of	compression.												
				SCHEME	OF STU	DY										
S. No.	Learning	g Content		Teaching – Learning Method	Descript Process	ion o	f T-L	Tea Hrs.	_	Pract	•	LRs Re	equired	Remarks		
Technique(Lossy andVideo Compression ,JPEG Compression B		r view of Types of companique(Lossy and Lossyle Compression, MPEG G Compression Basics ertext and Hypermedia	ess),	Traditional Lecture method + Handout	Teacher explain contents provide students	the and hando	out to	(5	C)	Hando Books Conte	s / E-	NIL		
11) portext and 11) pormed				SCHEME OF	ASSESS	MEN	Т									
S. No.	. No. Method of Assessment De		Descript	ription of Assessment			aximum Marks		Resou		Resources Requ		Requi	red	External / Into	
1	TERM	WORK	Student explain compres	* *		10			Assi	gnmer	ıt/Qu	ıiz		Internal		

DCD/	//Diplo	ma Wing \ Phonal	SCHEME FOR LEAR	NING	Bra	ınch C	ode	Co	ourse Co	ode	CO Code	LO Code	/
NGP	טואוט) א	ma Wing) Bhopal	OUTCOME		С	0	4				3	9	Format No.
Course	Name		COMPUTER GRAPI	HICS ANI) AN	IMA	TION	TE	CHNO	LOC	GY		
CO Des	cription	Illustrate Fundamenta	al Multimedia Technology a	nd Graph	ics I	mage	File F	`orm	ats.				
LO Des	O Description Distinguish Graphics Image		Image File Formats.										
,			SCHEME	OF STU	ΟY								
S. No.	No. Learning Content		Teaching – Learning Method	Descript Process	ion o	f T-L	Tea Hrs.		Prac Tut.	-	LRs Ro	equired	Remarks
1	 Raster Format, Bitmap (BMP) Format, Graphics Interchange Format (GIF), Joint Photographic Experts Group (JP EG), Tagged Image File Forma (TIFF), Portable Network Graphics (PN G) and their differences. 		Traditional Lecture method + Handout Tormat	Teacher explain t contents provide l students.	he and nando	out to		6	()	Hando Books Conte	s / E-	NIL
			SCHEME OF	ASSESSI	MEN	Т							
S. No.	Method	of Assessment	Description of Assessment	_	kimu larks	m	ı	Reso	urces F	Requi	red	Exte	rnal / Internal
1	END SE	CM THEORY EXAM	Student will be asked to write note on Image File Formats.		10			-	Γest Pa	per			External

PCDV	/Dinlon	na Wing) Bhopal	SCHEME FOR LEAR	NING	Brand	ch Co	ode	Coi	urse Co	de	CO Code	LO Code	
NGPV	וטוקוטו	na wing / Bhopai	OUTCOME		С	0	4				4	10	Format No
Course	Name		COMPUTER GRAPI	HICS AND	ANII	MA	ΓΙΟΝ	TEC	CHNO	LOG	Ϋ́		
CO Des	cription	Illustrate fundamental	of animation and their tec	hnology.									
LO Des	cription	Understand the need o	f Animation.										
		•	CCLIEBAE	OF CTUD									
			SCHEIVIE	OF STUD	Υ								
S. No.	Learning	g Content	Teaching – Learning Method	Description Process		T-L	Tead		Pract	•	LRs Re	equired	Remarks

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	END SEM THEORY EXAM	Student will be asked to list application and limitation of	10	Test Paper	External
		animation.			

RGPV	(Diplon	na Wing) Bhopal	SCHEME FOR LEAR OUTCOME	NING Branch Co	4	Course Code	Code 4	Code 11	Format No.4
Course	Name		COMPUTER GRAPH	HICS AND ANIMAT	TION TI	ECHNOLOG	GY		
CO Des	cription	Illustrate fundamenta	l of animation and their tech	nnology.					
LO Des	cription	Classify various anim	ation techniques.						
			SCHEME	OF STUDY					
S. No.	Learning	g Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract./ Tut. Hrs	LRs Re	equired	Remarks
• Types of animation: Traditional Animation, 2D animation, 3D animation, motion graphics, and stop motion animation, text animation			nal Traditional Curre	Teacher will explain the contents and provide handout to students.	6	0	Hando Books Conte	s / E-	NIL
			SCHEME OF	ASSESSMENT					
S No	Method	of Assessment	Description of Assessment	Maximum	Res	ources Requ	ired	Exter	nal / Internal

Marks

10

Test Paper

External

Description of Assessment

Student will be asked to list

types of animation.

S. No.

1

Method of Assessment

END SEM THEORY EXAM

RGPV	(Diplon	na Wing) Bhopal	SCI	HEME FOR LEAR OUTCOME	NING	Brai	nch Co	ode 4	Course Code		CO Code	LO Code	Format No.
Course	Name		C	OMPUTER GRAPI	HICS AN			TION T	ЕСН	NOLO(
CO Des	cription	Illustrate fundamenta	ıl of ani	mation and their tecl	hnology.								
LO Des	cription	Make use of various t	echniqu	es for animation.									
				SCHEME	OF STU	DY							
S. No.	Learning	Content		Teaching – Learning Method	Descrip ^o Process		T-L	Teach Hrs.		ract./ ut. Hrs	LRs R	equired	Remarks
1	to cr Stag Char Base	mation techniques: techniques: techniques animation, Key frame, Timeline, Deformation acter Animation, Physical Animation, Procedura aniques, Groups of Objects	ning, ns, es-	Traditional Lecture method + Handout	Teacher explain contents provide students	the and hando	ut to	9		0	Hande Books Conte	s / E-	NIL
				SCHEME OF	ASSESS	MEN	Γ						
S. No.	Method	of Assessment	Descri	otion of Assessment	_	ximun ⁄Iarks	n	Re	sourc	es Requ	ired	Exte	rnal / Interna
1	LAB W	ORK	animat	rudent will be asked to list nimation techniques used create animation. Lab Ass				ssignme	ent		Internal		
		ADDI	ITIONA	L INSTRUCTIONS F	OR THE	HOD	/ FAC	ULTY	(IF AI	NY)			

DCDV/	/Dinlon	aa Wing \ Phonal	SCHEME FOR LEA	RNING	Branch C	ode	Cc	ourse Co	ode	CO Code	LO Code		
KGPV	ווטוקוטו	na Wing) Bhopal	OUTCOME	С	0	4				5	13	Format No.	
Course	Name		COMPUTER GRAI	PHICS AND A	NIMA	TION	TEC	CHNO	LOG	Y			
CO Des	scription	Develop 2D animation	applications.										
LO Des	cription	Select software for co	mputer animation.										
			SCHEM	E OF STUDY									
S. No.	Learning	Content	Teaching – Learning Method	Description Process	1	Tea Hrs	_	Pract	•	LRs R	equired	Remarks	
Animation-i Visual Studi pencil2d,Cra flipbook. • 3D Animatio		nnimation software, 2D mation- introduction with all Studio Flash, Animak sil2d,CrazyTalk Animatoook. Animation- Introduction der- work environment.	rer, method + For, Handout	Teacher wil explain the contents and provide han students.	i		9	0		Handouts / Books / E- Contents		NIL	
			SCHEME O	F ASSESSME	NT								
S. No.	Method	of Assessment	Description of Assessment	Maxim Marl			Reso	urces R	Requir	ed	External / Interna		
1	END SEM PRACTICAL of varie		Student will be asked uses of various animation software.	dent will be asked uses arious animation 10				b Test	Papei	r		External	

DCD//	(Dinlor	na Wing) Bhopal	SCH	IEME FOR LEAR	NING	Bra	nch C	ode	Со	urse C	ode	CO Code	LO Code	5 N . /
NGPV	(Dipion	ia wilig j Bilopal		OUTCOME		С	0	4				5	14	Format No.
Course	Name		C	OMPUTER GRAPI	HICS AN	D AN	IMA	TION	TEC	CHNC	LOC	GY		
CO Des	cription	Develop 2D animation	n applica	tions.										
LO Des	cription	Apply 2D computer a	animatio	n techniques.										
				SCHEME	OF STU	DY								
S. No.	Learning	Content		Teaching – Learning Method	Descrip Process	tion o	f T-L	Tea Hrs		Prac Tut.	•	LRs R	equired	Remarks
1	• The Stag and Inter Box.	h Basics: Flash Work Flonation Using Flash. Flash Work Environmer e and the Time Line, Syntances, Symbols and factive Movies, Using the Using Working the France time line.	nt: The mbols	Traditional Lecture method + Handout	Teacher explain contents provide students	the and hando	out to		9		0	Hande Books Conte	s / E-	NIL
				SCHEME OF	ASSESS	MEN	Т							
S. No.	Method	of Assessment	Descrip	tion of Assessment	_	ximuı ⁄larks	n		Reso	urces	Requi	ired	Exte	rnal / Internal
1	END SE	M PRACTICAL	various	ident will be asked ious method for 2D 10 mation creation.				Lab Test Pa				er		External
		ADDI	ITIONAL	. INSTRUCTIONS F	OR THE	HOD	/ FA	CULT	Y (IF	ANY)			

RGPV	(Dinlon	na Wing) Bhopal	SCI	HEME FOR LEAR	NING	Bra	nch C	ode	Со	urse C	ode	CO Code	LO Code	Format No.
NGI V	(Dipion	na wing / bilopai		OUTCOME		С	0	4				5	15	FORMAL NO.
Course	Name		C	OMPUTER GRAPI	HICS ANI	D AN	IMA	TION	TEC	CHNO	LOC	SY		
CO Des	cription	Develop 2D animation	n applica	ations.										
LO Des	cription	Create 2D computer	animatio	on application.										
				SCHEME	OF STU	DY								
S. No.	Learning	g Content		Teaching – Learning Method	Descript Process	ion o	f T-L	Tea		Prac Tut.	-	LRs R	equired	Remarks
 Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates, and Steps for creating animations. Frame by Frame Animations. Publishing and Exporting. 				Traditional Lecture method + Handout	Teacher explain t contents provide students.	the and hando	out to		9)	Hande Books Conte	s / E-	NIL
				SCHEME OF	ASSESSI	MEN	Т							•
S. No.	Method	of Assessment	Descrip	otion of Assessment		ximuı 1arks	n		Reso	urces l	Requi	red	Exte	rnal / Internal
				t will be asked basic mation using flash re.		10			Lal	o Test	Pape	er		External