University of Mumbai



No. AAMS_UGS/ICC/2023-24/71

Sub: B. Des. (Design) (Sem - III & IV) (CBCS).

CIRCULAR:-

Attention of the Principals of the Affiliated Colleges and Directors of the Recognized Institutions in Faculty of Science & Technology is invited to this office Circular No. AAMS UGS/ICC/2023-24/08 dated 09th June, 2023 relating to the B. Des. (Design).

They are hereby informed that the recommendations made by the Board of Deans at its meeting held on 27th October, 2023 <u>vide</u> item No. 6.15 (N) have been accepted by the Academic Council at its meeting held on 01st November, 2023 <u>vide</u> item No. 6.15 (N) and that in accordance therewith, syllabus of B. Des. (Design) (Sem – III & IV) (CBCS) is introduced and the same has been brought into force with effect from the academic year 2023-24.

(The said circular is available on the University's website www.mu.ac.in).

MUMBAI – 400 032 24th November, 2023 12-th December, (Prof. Sunil Bhirud)
I/c. REGISTRAR

The Principals of the Affiliated Colleges and Directors of the Recognized Institutions in Faculty of Science & Technology.

A.C/6.15(N) /01/11/2023

Copy forwarded with Compliments for information to:-

- 1) The Chairman, Board of Deans,
- 2) The Dean, Faculty of Science & Technology,
- 3) The Chairman, Board of Studies,
- 4) The Director, Board of Examinations and Evaluation,
- 5) The Director, Department of Students Development,
- 6) The Director, Department of Information & Communication Technology,
- 7) The Director, Institute of Distance and Open Learning (IDOL Admin), Vidyanagari,
- 8) The Co-ordinator, MKCL.

Copy for information and necessary action :-

- 1. The Deputy Registrar, College Affiliations & Development Department (CAD),
- 2. College Teachers Approval Unit (CTA),
- 3. The Deputy Registrar, (Admissions, Enrolment, Eligibility and Migration Department (AEM),
- 4. The Deputy Registrar, Academic Appointments & Quality Assurance (AAQA)
- 5. The Deputy Registrar, Research Administration & Promotion Cell (RAPC),
- 6. The Deputy Registrar, Executive Authorities Section (EA)
 He is requested to treat this as action taken report on the concerned resolution adopted by the Academic Council referred to the above circular.
- 7. The Deputy Registrar, PRO, Fort, (Publication Section),
- 8. The Deputy Registrar, Special Cell,
- 9. The Deputy Registrar, Fort Administration Department (FAD) Record Section,
- 10. The Deputy Registrar, Vidyanagari Administration Department (VAD),

Copy for information:-

- 1. The Director, Dept. of Information and Communication Technology (DICT), Vidyanagari,
 - He is requested to upload the Circular University Website
- 2. The Director of Department of Student Development (DSD),
- 3. The Director, Institute of Distance and Open Learning (IDOL Admin), Vidyanagari,
- 4. All Deputy Registrar, Examination House,
- 5. The Deputy Registrars, Finance & Accounts Section,
- 6. The Assistant Registrar, Administrative sub-Campus Thane,
- 7. The Assistant Registrar, School of Engg. & Applied Sciences, Kalyan,
- 8. The Assistant Registrar, Ratnagiri sub-centre, Ratnagiri,
- 9. P.A to Hon'ble Vice-Chancellor,
- 10. P.A to Pro-Vice-Chancellor,
- 11. P.A to Registrar,
- 12. P.A to All Deans of all Faculties,
- 13. P.A to Finance & Account Officers, (F & A.O),
- 14. P.A to Director, Board of Examinations and Evaluation,
- 15. P.A to Director, Innovation, Incubation and Linkages,
- 16. P.A to Director, Department of Lifelong Learning and Extension (DLLE),
- 17. The Receptionist,
- 18. The Telephone Operator,

Copy with compliments for information to:-

- 19. The Secretary, MUASA
- 20. The Secretary, BUCTU.

University of Mumbai



Syllabus for
B. Des. (Design)
Semester – III & IV
Choice Based Credit System

(With effect from the academic year 2023-24)

University of Mumbai



Syllabus for Approval

Sr.		
No.	Heading	Particulars
1	Title of Course	B. Des. (Design)
2	Eligibility for Admission	Passed HSC examination of Maharashtra State Board of Secondary and Higher Secondary Education (any Stream) or its equivalent examination with English as one of the subject and obtained at least 45% marks in aggregate. (Aggregate 40%marks for Backward Class categories, Economically Weaker Section and Persons with Disability candidates belonging to Maharashtra State) and obtained nonzero score in CET conducted by the Competent Authority (MAH-B. Design CET)
3	Passing Marks	40 %
4	Ordinance / Regulations (if any)	
5	No. of years/Semesters	4 years / 8 semester
6	Level	Under Graduation
7	Pattern	Semester
8	Status	New
9	To be implemented from Academic Year	With effect From Academic Year: 2023- 24

Offg. Associate Dean Faculty of Science and Technology

Offg. Dean Faculty of Science and Technology

Preamble

Introduction:

Design is a steam which shapes human experience of the future by learning from the past and the present. Design professionals are trained by exploration and practice to spot patterns, trends and possibilities in people's day to day lives and gain insights from them. For these insights to be objective, meaningful and most importantly, actionable enough to evolve into ideas that improve human lives as well as the environment, a multidisciplinary field like design offers itself like a framework of effective problem solving.

The B.Des. Course is a 4-year full-time course in which candidates are admitted after 10+2 level examination or its equivalent as per eligibility guidelines of the AICTE/ DTE/University of Mumbai.

The entire curriculum has been drafted to develop competencies required as a Designer in a gradual manner that spreads across the four years.

Aims and Objectives:

The aim of the undergraduate course is to develop skills, knowledge and attitude among the young design aspirants to become creative thinkers and problem solvers with a comprehensive value system. The value system here not only means social, moral and ethical values but also valuing our environment and the ecosystem.

The program aims at encouraging students to create original designs which involves converting artistic talent and creativity in designing apparel as well as products of everyday life. It provides an enhanced environment for creative things and integrated learning.

O Title of Course:-	Bachelor of Design in Design
Title of Course:-	(B. Des.)
0	Passed HSC examination of Maharashtra State Board of
Eligibility:-	Secondary and Higher Secondary Education (any Stream) or its equivalent examination with English as one of the subject and obtained at least 45% marks in aggregate. (Aggregate 40%marks for Backward Class categories, Economically Weaker Section and Persons with Disability candidates belonging to Maharashtra State) and obtained nonzero score in CET conducted by the Competent Authority (MAH-B. Design CET)
R	
Admission	MAH-B. Design CET Entrance Examination for Admission to
Procedure:-	Professional Courses in Bachelor of Design Education through State Common Entrance Test Cell, Mumbai for the academic year will be held at the various examination centers within Maharashtra State. The Competent Authority shall invite Online Applications from Candidates for participating in CET and/ or CAP for seeking admission to the Courses for which State CET or alternative
_	entrance examination is required for the academic year.
R Term:-	From the academic Year 2022-23

R Fee:	As per Fees Regulating Authority (FRA)
R DURATION:-	4 Years
R NUMBER OF STUDENTS:-	30
R SCHEME OF EXAMINATION:-	Choice Based Credit System

Learning Outcomes:-

Learner should

- 1. demonstrate skills and knowledge of the practices, languages, forms, materials and technologies in their relevant discipline;
- 2. research, develop and evaluate design concepts and processes by thinking creatively, critically and reflectively;
- 3. apply skills and knowledge to the creation, visualization and production of design projects;
- 4. work independently and collaboratively on design projects and respond to project demands;
- 5. interpret, communicate and present ideas, problems and arguments in modes suited to a range of audiences; and
- 6. recognize and reflect on social, cultural technological, environmental and ethical issues of creative practice and design considering local and international perspectives.

Program Structure for Second Year Bachelor of Design in Design

SEMESTER III

University of Mumbai

(With Effect from 2023-2024)

Course	Course Name		ching Sontact H		(Credits A	ssigned
Code	Course Name	Theo ry	Tutori al	Studio	Theory	Studio	Total Credits
BDC301	Design Arts and Aesthetics	3	-	-	3		3
BDC302	Studies in Form	3	1	1	4	-	4
BDC303	Design Thinking	3			3		3
BDC304	Industrial Design-I	3	1		4		4
BDC305	Communication Design-I	2	1		3		3
BDL301	Design Arts and Aesthetics			2		1	1
BDL302	Communication Design-I		-1	2		1	1
BDL303	Model Making Workshop-I			4		2	2
BDL304	Mini Project 1A			4		2	2
	Total	14	3	12	17	6	23

			Exam	ination	Scheme				
Course		Inter	ternal Assessment		End Sem	Exam Duration	Term	Pract/	Total
Code	Course Name	Test 1	Test 2	Avg	Exam	(Hrs)	Work	Oral	
		20	20	20	80	3	50	50	100
BDC301	Design Arts and Aesthetics	20	20	20	80	3	-1		100
BDC302	Studies in Form	20	20	20	80	3	1	-	100
BDC303	Design Thinking	20	20	20	80	3	1	-	100

BDC304	Industrial Design-I	20	20	20	80		3			100
BDC305	Communication Design 1	20	20	20	80		3			100
BDL301	Design Arts and Aesthetics							25	25	50
BDL302	Communication Design 1					-		25	25	50
BDL303	Model Making Workshop-I					-		50	50	100
BDL304	Mini Project 1A					-		25	25	50
	Total			100	400			125	125	750
Dw	 ogram Structu	ra for (Second	VANE D	Rachala	r of Da	cian in	Decia	n	
11	ogi ami Sti uctu	16 101 1	SEME			I OI DC	sign in	Desig.	ш	
			Universit		· ·					
			ith Effect	•						
Course	Course Name		ching Scho ntact Hou		Cred	dits Assi	gned			
Code	Course Name	Theory	Tutorial	Studio	Theory	Studio	Total Credits			
BDC401	Design Research Including User Study	3			3		3			
BDC402	Packaging Design and Branding	3	1*		4		4			
BDC403	Interior Landscape Design	3	1*		4		4			
BDC404	Industrial Design -II	3	1*		4		4			
BDC405	Communication Design -II	2			2		2			
BDL401	Study			2		1	1			
BDL402	Communication Design -II			2		1	1			

BDL403	Model Making Workshop-II			4		2	2		
BDL404	Mini Project 1 B	1		4	1	2	2		
	Total	14	3	12	17	6	23		

Course Name	Examination Scheme									
	Interr	nal Assess	ment	End Sem	Exam Durati on	Term Work	Pract/ Oral	Total		
	Test 1	Test 2	Avg	Exam	(Hrs)					
	20	20	20	80	3	50	50	100		
Design Research Including User Study	20	20	20	80	3			100		
Packaging Design and Branding	20	20	20	80	3			100		
Interior Landscape Design	20	20	20	80	3	1		100		
Industrial Design -II	20	20	20	80	3	-1		100		
Communication Design -II	20	20	20	80	3	1		100		
Design Research Including User Study						25	25	50		
Communication Design -II						25	25	50		
Model Making Workshop-II						50	50	100		
Mini Project 1 B		1	1	-		25	25	50		
Total			100	400		125	125	750		
	Design Research Including User Study Packaging Design and Branding Interior Landscape Design Industrial Design -II Communication Design -II Design Research Including User Study Communication Design -II Model Making Workshop-II Mini Project 1 B	Course Name Test 1 20 Design Research Including User Study Packaging Design and Branding Interior Landscape Design Industrial Design Industrial Design -II Communication Design -II Design Research Including User Study Communication Design -II Model Making Workshop-II Mini Project 1 B Test 1 20 20 20 21 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20	Test 1 Test 2 20 20 Design Research Including User Study Packaging Design and Branding Interior Landscape 20 20 Design Industrial Design -II Communication Design -II Design Research Including User Study Communication Design -II Model Making Workshop-II Mini Project 1 B	Course Name Test 1 Test 2 Avg 20 20 20 Design Research Including User Study Packaging Design and Branding Interior Landscape Design Industrial Design -II Communication Design -II Design Research Including User Study Communication Design -II Design Research Including User Study Communication Design -II Model Making Workshop-II Mini Project 1 B Test 1 Test 2 Avg 20 20 20 20 20 20 20 20 20 20	Test 1 Test 2 Avg 20 20 20 80 Design Research Including User Study Packaging Design and Branding Interior Landscape Design Industrial Design -II Communication Design -II Design Research Including User Study Test 1 Test 2 Avg 20 20 80 Solution 20 20 80 Solution S	Test 1 Test 2 Avg Exam Duration	Test 1 Test 2 Avg End Sem Exam Term Work	Course Name		

Course Code	Course Name		hing Sch ntact Ho			
Course Code	Course Name	Theor y	Tutori al	Studi o	Theor y	Studio
BDC301	Design Arts and Aesthetics	3	1		3	-1
BDC302	Studies in Form	3	1		4	
BDC303	Design Thinking	3			3	
BDC304	Industrial Design-I	3	1		4	
BDC305	Communication Design-I	2	1		3	
BDL301	Design Arts and Aesthetics			2		1
BDL302	Communication Design-I			2	-1	1
BDL303	Model Making Workshop-I	1	-1	4	-1-	2
BDL304	Mini Project 1A			4		2
T	otal	14	3	12	17	6

		Intern	nal Assess	ment	End	Exam Duration	Term	Pr act	Tota
Course Code	Course Name	Test 1	Test 2	Avg	Sem Exam	(Hrs)	Work	/ Or al	l
		20	20	20	80	3	50	50	100
BDC301	Design Arts and Aesthetics	20	20	20	80	3	-1	1	100
BDC302	Studies in Form	20	20	20	80	3		1	100

Т	otal			100	400		125	125	750
BDL304	Mini Project 1A	1					25	25	50
BDL303	Model Making Workshop-I						50	50	100
BDL302	Communication Design 1	1	-				25	25	50
BDL301	Design Arts and Aesthetics	-	1	-	1		25	25	50
BDC305	Communication Design 1	20	20	20	80	3	1		100
BDC304	Industrial Design-I	20	20	20	80	3	1		100
BDC303	Design Thinking	20	20	20	80	3			100

	Teaching Schen	ne				
Course Code	Course Nome		ontact ours)	Credits Assigned		
	Course Name	Theor y	Studio	Theor y		To tal
BDC301	Design Arts and Aesthetics	3		3		3
		-	•			

	Course Name Design Arts and Aesthetics	Examination Scheme								
BDC301 aı										
		Internal Assessment			End Sem Exam	Exam Duratio n (in Hrs)	Term Work	Proof	To tal	
		Test 1	Test 2	Avg.						
		20	20	20	80	3			10 0	

	(Course	Outcom	es/Obj	ectives						
Course Obje	ectives										
1	To understand	the hist	orical tre	ends of	Indian	art and cu	ılture				
2	To understand of society.	how to	use art fo	or the s	social ar	nd intelled	ctual de	velopm	ent		
Course Outo	comes: The learn	er will	be able t	o							
1	Understand the	import	ance of a	aesthet	ics in de	esign.					
2	Contribute in tl	ne deve	lopment	of soc	iety thro	ough art.					
3	Understand the	relatio	n betwee	en art a	nd hum	an emotic	ons				
4	Understand and	d learn v	various d	lesign _j	philosop	phies.					
5	Understand the development	contrib	oution of	Indian	art and	design in	mankii	nd			
Sr.No.	Module		Detailed Content u								
I	Module 1	_			_	ate the va	-		7		
П	Module 2	Social	and inte	llectua	l develo	pment th	rough a	rt.	7		
III	Module 3		opment of sive field			les in crea	ative an	d	8		
IV	Module 4	Scand		design,		Ilm school and Art i			8		
V	Module 5	Holist	ic contril	bution	of India	n art and	design.		8		
	1.D. 6										
Text Books	and References:										
. Bergson, H. (1983). Creative evolution. University Press of											
America.											

				i			1			
2. Sparke, P.										
(2013). An										
introduction										
to design and										
culture: 1900										
to the present.										
Rout ledge.										
3. H. Kumar										
Vyas (2007)										
"Design the										
International										
Movement										
with Indian Parallel".										
4. Robert										
Bone (2002) "Art and										
Art and Design										
Fundamentals										
","										
5. De Witt H.										
Parker (2001)										
"The										
principle of										
Aesthetics".										
Internal Asse	ssment (IA) for	20 ma	rks:							
IA will consist	t of Two Compu	lsory Iı	nternal A	Assessr	nent Te	sts. Appro	ximate	ly 40%	to	
50% of syllab	us content must	be cove	red in F	irst IA	Test an	d remaini	ng 40%	to 50%	of of	
syllabus conte	nt must be cover	red in S	econd IA	A Test						
End Semester	Examination:									
Weightage of	each module in e	end sen	nester ex	amina	tion wil	l be propo	ortional	to num	ber	
	ecture hours mei					1 1				
_										
Ouestion Pa	per will compris	e of a t	otal of s	ix ques	stions ea	ch carryi	ng 20 m	arks		
	ll be compulsory									
	ning questions									
	be from differen								ule	
	must be from an									
• A total	of four questio	ns need	to be a	nswere	ed					

		Te	aching (Schem	1	ntoot	<u> </u>					
C C- 1-	C	N I			He	ontact ours)	Credits Assigned					
Course Code	Cou	rse Na	me		Theor y	Studio	Theor y	Studi o	To tal			
BDC302	Studi	es in F	orm		4		4		4			
	T											
				Exa	minatio	on Schem	ie	I				
		Theory Term P						Theo				То
Course Code Course Name	Course Name	Internal Assessment			End Sem Exam	Exam Duratio n (in Hrs)	Work	Pract	tal			
	Test 1 Test 2 Avg.		·									
BDC302	Studies in Form	20	20	20	80	3			10 0			
G 01:		ourse (Outcom	es/Obj	ectives							
Course Objec			• • •		. •							
1	To understand f											
2	Develop ability expressions	to man	ipulate f	torm fo	or demo	nstration (of varie	d				
3	Understand and language.	develo	p a fami	ily of f	orms w	ith a comi	non des	ign				
Course Outco	omes: The learne	er will l	oe able t	0								
1	Able to generate design.	e two d	imensio	nal rhy	thms, d	eformatio	ns and p	patterns	s in			
2	Understand in c	_	_	_	-		-					
3	Able to design a and which utiliz assembly proceed	es a co	mmonly	availa	ible mat	erial and	-	_	-			
4		Inderstand semantic analysis of hand-held products and similar lements.										

5	Able to carry or elements.	ut synta	ctic ana	lysis of	f hand-h	ield produ	icts and	similaı	•		
6	Knowledge on jelements.	pragma	tic analy	sis of	hand-he	eld produc	ets and s	imilar			
Sr.No.	Module			Det	ailed C	ontent			Ho ur		
I	Understandin g of form	volum (Plator	e, Classi nic, Arch sional rh	fication fimede	n of for an).To	of a flat s m 2D & 3 generate t nations an	SD, Solid wo	ds	7		
II	Volume relationships	produc geome	ct of low try and v	compl which t	exity, r utilizes	ibordinate elatively s a commoi rdboard.	simple	sign a	7		
III	Transformati on	subtrac	dii manipulation, Form transition (addition & straction). To develop an understanding of the gnitive, morphological process in designing a m.								
IV	Form, Emotions & Identity		mentatio			form, Identexture &	•	Family	8		
V	Form explorations	thread,	, Plaster tic analy	of Pari	s, Clay	Like- Pap etc.) To c ld produc	arry out	t	8		
Text Books a	nd References:										
1. Elam, Kimberly; Geometry of Design: Studies in Proportion and Composition, Princeton Architectural Press, 2001. 2. Bachelard, Gaston; Jolas,											

Maria									
(Translator);									i
The Poetics									i
of Space,									
Publisher:									
Beacon Press;									
Reprint									
edition, 1994									i
3.Language									
of Vision, by									
Gyorgy									
Kepes and S									
Giedion,									
Literary									
Licensing,									
LLC (4									
August 2012).									
Intermal Agge	gament (TA) for	20 ma	mlra.	1	1	ı	ı		İ

Internal Assessment (IA) for 20 marks:

IA will consist of Two Compulsory Internal Assessment Tests. Approximately 40% to 50% of syllabus content must be covered in First IA Test and remaining 40% to 50% of syllabus content must be covered in Second IA Test

End Semester Examination:

Weight age of each module in end semester examination will be proportional to number of respective lecture hours mentioned in the curriculum.

Question paper format

- Question Paper will comprise of a total of six questions each carrying 20 marks.
- Q.1 will be compulsory and should cover maximum contents of the syllabus
- Remaining questions will be mixed in nature (part (a) and part (b) of each question must be from different modules. For example, if Q.2 has part (a) from Module 3 then part (b) must be from any other Module randomly selected from all the modules)
- A total of **four questions** need to be answered

		Teaching	Schem	e				
Course Code	Course	Nome			ntact ours)	Credits	s Assig	ned
Course Code	Course	e Name		Theor	Studio	Theor	Studi	To
				\mathbf{y}	Studio	y	0	tal
BDC303	Design 7	Γhinking		4		4	1	4

Course Code	Course Name	Examination Scheme
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							Term P		То	
			Internal ssessmei		End Sem Exam	Exam Duratio n (in Hrs)	Work	Pract	tal	
		Test 1	Test 2	Avg.						
BDC303	Design Thinking	20	20	20	80	3			10 0	
		ourse (Outcom	es/Obj	ectives					
Course Obje	ctives									
1	What design thin Design Thinking	_		nen to	use it, F	'amiliarize	with d	ifferent	,	
2	How to prepare Problem/Oppor and analyse app feedback in a re	tunity i ropriat	dentifica e data, a	ition, d nd dev	levelop elop wa	sound hyp	otheses	s, collec		
3	How to use desi Divergent Think	_	king to	genera	te innov	ative idea	ıs (Conv	vergent	&	
4	How to take the likely to productoutcomes	_	_		d and de	termine w	hich or	nes are		
Course Outc	omes: The learne	er will l	oe able to	o						
1	Apply the theor	y of De	esign Th	inking	to publi	ic design	challeng	ges.		
2	Use their skills concerns from t the Green Line.	he pers							ng	
3	Generate ideas	using C	reative t	hinkin	g tools	and techn	iques.			
4	Create compelli communication	_		-	sentatio	ns through	ı visual			

5	Collaborate with of expertise to for opportunities for the control of the control	ormula	te and p						
6	Seek consultation leaders of varior innovative appropriate (and reframing)	us com oaches	munities to comn	, orgai nunity	nization engage	s, and age ment, pro	encies to blem- se	develo	
Sr. No.	Module			Det	ailed C	ontent			Ho ur s
I	Introduction to Design Thinking	Introdu	action to	Desig	n Think	when to uting, its syccess in a contract	stemati		7
II	Problems & Opportunities	opport identif analyze collect	unity ari ication, o e approp meaning	ses – F develog oriate d gful fe	Problem p sound ata, and edback	ke action /Opporture hypothes develop in a real-vellem state	nity ses, collo ways to world		7
III	Design Thinking Frameworks	Familia Frame	arize wit	h diffe Create	rent De	esign Thin problem st	king	ts for	8
IV	Need to be Empathetic	,Reflec	ction 1 - ne the pr	Projec	t presen	esponsibi ntations ar ent based	nd revie		8
V	Use of design thinking	Sketch possib	es, Drav	ving of nt idea	ideas e s to cre	and techi exploration ate propo alize	ns, iden	tify	8
Text Books a	nd References:								
1.Kepes, Gyorgy; Language Of Vision, Dover Publications, 1995 Elam, Kimberly;									
2.Geometry Of Design: Studies In									

Proportion						
And						
Composition,						
Princeton						
Architectural						
Press, 2001						
Bachelard,						
Gaston						
3.Bachelard,						
Gaston; Jolas,						
Maria						
(Translator);						
The Poetics						
Of Space,						
Publisher:						
Beacon Press;						
Reprint						
edition, 1994						
		•		•	•	

Internal Assessment (IA) for 20 marks:

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- A total of **four questions** need to be answered

	Teaching Sc	heme				
Corres Codo	Corres Norma		ontact ours)	Credits Assigned		
Course Code	Course Name	Theor	Studio	Theor	Studi	To
		y	Studio	y	0	tal
BDC304	Industrial Design-I	4		4		4

				Exa	minatio	on Schem	ie		
				Theo	y		Term		To
Course Code	Course Name		Internal ssessme		End Sem Exam	Exam Duratio n (in Hrs)	Work	Pract	tal
		Test 1	Test 2	Avg.					
BDC304	Industrial Design-I	20	20	20	80	3			10 0
			O4	ag/Obá	0.04				
Course Object		ourse (Outcom	es/Obj	ectives				
Course Object	To develop the	ability	to indep	endent	lv carry	out resea	rch /inv	estigati	on
1	and developmen	•							
2	To develop the report/documen	ability		_			l techni	cal	
	Тероги аосили								
Course Outco	omes: The learne	er will 1	ne able to	0					
1	Develop leaders				for indu	ustries by	nurturii	ng mult	iple
2	Develop engine and developmen						d with d	esignin	g
3	Grow in the devenable graduate industrial design	s to im			_				
4	Design, develop that include peo appropriate ana	ple, ma	aterials,	inform	ation, e	quipment	and ene	rgy usi	
5	Design, develop that include peo appropriate ana	o, imple ple, ma	ement an aterials,	d impi inform	ove inte ation, e	egrated sy quipment	stems o and ene	r produ ergy usi	
Sr.No.	Module			Det	ailed C	ontent			Ho ur
I	Industrial products and aesthetics	Simple	produc	ts, pro	duct col	or and aes	sthetics.		7

II	Product Design	_	product l		-	n consum	ers poin	t of	7	
III	Industrial design terms	meanir		n and	symbol,	y, product a			8	
IV	Study of different industrial products					cts, compl	ex prod	ucts	8	
V	Interaction Design	Interac Inform	ction, Ta	sk ana e, Con	lysis, de trols an	esign. Co esign, Fitn d displays	ess,		8	
Toyt Rooks or	 nd References:									
	References:					<u> </u>				
1. Heufler, G. (2004).										
Design										
basics.										
NiggliVerlag.										
2. Bramston,										
D. (2010).										
Basics										
Product										
Design 03:										
Visual										
Conversations										
(Vol. 3).										
AVA Dublishing										
Publishing.										
3. Bramston,										
D. (2008). Basics										
Product										
Design 01:										
Idea										
Searching										
(Vol. 1).										
AVA										
Publishing.										
4. Cuffaro,										
D&Zaksenber										
g, I (2013)										
The Industrial										
Design										

	ssment (IA) for								
	st of Two Compu us content must syllabus con	be cove	ered in F	First IA	Test an	d remain	ing 40%	•	
IA will consist 50% of syllabi	ssment (IA) for t of Two Compu us content must l nt must be cover	lsory In	nternal <i>A</i> ered in F	irst IA					
Question pap			1 2						
	per will compris ll be compulsory								
question must 3 then part (b)	be from different must be from ar of four question	nt modu ny othe	ıles. For r Modul	examp e rando	ole, if Qand only sel	2 has par	t (a) fro	m Mod	
		Te	aching S	Schem	e				
					-	ntact ours)	Credit	s Assig	ned
Course Code	Cour	waa Na	mo						
Course Code		rse Na			Theor y	Studio	Theor y	Studi o	To tal
Course Code BDC305	Cou Communi			1		Studio 			
					y 2	Studio on Schem	y 2		tal
					y 2 minatio		2 ne	0	2
BDC305		cation		Exa	y 2 minatio		y 2		tal

Communication Design 1

BDC305

	C	ourse (Outcom	es/Obi	ectives				
Course Obje									
	To develop an a	ability t	o design	visual	commi	inication	means f	or	
1	effective comm	unication	on.						
2	To develop an a	ability t	o design	visual	comm	inication	in vario	us forn	ns.
Course Outc	comes: The learn	er will b	be able to	0		I.	I.	1	
	Develop thinking				semanti	cs and otl	ner tools	s for	
1	effective comm			,					
2	Develop the ski	ll to use	e human	perce	otion, ac	esthetics,	emotion	and	
2	subjectivity for								
3	Use the tools of	f visual	commui	nicatio	n.				
4	Develop comm	unicatio	n desigi	n using	visual	basics and	d visual	langua	ige.
5	Understand the								
									Но
Sr.No.	Module			Det	ailed C	ontent			ur
									S
	Introduction	Comm	unicatio	n basic	s, semi	otics, sem	antics,	and	
I	to	typogr	aphy and	d: Intro	duction	to Comn	nunicati	on	7
1	communicatio	Design	ı						'
	n design								
	Effective	Effecti	ve Com	munica	ation. H	uman Per	cention.	_	
II	Communicati					jectivity,	-	,	7
	on through	Percep				<i>3</i>			
	perception Visual	Comit	ioni IIvi	mon Ex	va Onti	aal Illusia	n Colo		
III	Communicati	_			-	cal Illusio 1, Motion			8
111	on	Гегсер	tion, De	puire	сериот	i, Motion	гегсері	.1011.	0
		Visual	Langua	ge: Sei	niotics	- Semanti	cs. Svnt	tactic	
	¥7* ¥		· ·	_		Icon, Ind	, ,	,	
IV	Visual	_		_	_	Visual Fo	•		8
	Language					al Flow ar			
		Visual	Compos	sition.					
				_		tion Chur	_		
\mathbf{V}	Information				-	tative info		n,	8
*	Design					of groupi	ng,		
		Inform	ation G	aphics	•	1	ı		
	1								
Fext Books a	and References:	1				1	1		
. Malamed,									
C. (2011).									
Visual									
anguage for									

designers:										
principles for										
creating										
graphics that										
people										
understand.										
Rockport										
Pub.										
2.Arnheim, R.										
(1969).										
Visual										
thinking.										
Univ of										
California										
Press.										
3. Bertin, J.										
(1981).										
Graphics and										
graphic										
information										
processing.										
Walter de										
Gruyter.										
4. Barry, A.										
M. (1997).										
Visual										
intelligence:										
Perception,										
image, and										
manipulation										
in visual										
communicatio										
n. SUNY										
Press										
5. Meirelles, I	. (2013). Design	for infe	ormation	n: an in	troduct	ion to the	historie	s, theo	ries,	
and best pra	ctices behind ef	fective	informa	tion vi	sualizat	ions. Rocl	kport pu	blisher	s.	
Internal Asso	ssment (IA) for	20 ma	rke.							
	<u> </u>			A	T	4 A		1 400/	4 -	<u> </u>
	st of Two Comp	•						•		
30% of Syllab	us content must							10 50%	6 OI	
	syllabus con	nent mi	ist be co	verea	m Secoi	iu ia les	ι			
Internal Asse	ssment (IA) for	20 ma	rks:							
				00000	nont To	ata Anne	vimetel	x, 100/	to	
IA WIII COUSIS	t of Two Compu	usory H	memai F	issessi	пені те	sıs. Appro	ximate	ıy 4 0%	ω	1

50% of syllabus content must be covered in First IA Test and remaining 40% to 50% of syllabus content must be covered in Second IA Test **Ouestion paper format** • Question Paper will comprise of a total of six questions each carrying 20 marks. Q.1 will be compulsory and should cover maximum contents of the syllabus Remaining questions will be mixed in nature (part (a) and part (b) of each question must be from different modules. For example, if Q.2 has part (a) from Module 3 then part (b) must be from any other Module randomly selected from all the modules) A total of **four questions** need to be answered **Teaching Scheme** (Contact **Credits Assigned** Hours) Course Code **Course Name** Theor | Studi | To Theor Studio tal y 1 **BDL301 Design Arts and Aesthetics Examination Scheme Theory** Term To **Pract** Course Code | Course Name | Work tal Exam End Internal Duratio Sem n (in Assessment Exam Hrs) **Test** Test 2 Avg. 1 **Design Arts BDL301** 25 25 50 and Aesthetics **Course Outcomes/Objectives Course Outcomes** Understand the importance of aesthetics in design. 2 Contribute in the development of society through art. 3 Understand the relation between art and human emotions 4 Understand and learn various design philosophies. Understand the contribution of Indian art and design in mankind

5

development

Sr.No.	Module			Det	ailed C	ontent			Ho ur s	
I	Lab Act 1	_			_	ate the va	•		4	
II	Lab Act 2	Social a	and inte	llectua	l develo	pment th	rough a	rt.	4	
III	Lab Act 3	Develop express	pment o	of diffe d of hu	rent sty man en	les in creanotions.	itive and		4	
IV	Lab Act 4	_	navian d	lesign,		Ilm schoo and Art i			4	
V	Lab Act 5	Holistic	contrib	oution	of India	n art and	design.		4	
challenging e suggested list applications o motivated to Text Books a	urse instructors xperiments, / L) from within the explored think differentled References:	ab work he currio l to give	k (limite culum,	ed to n so tha	naximu t the fu	m 30% v ndament	ariation als and	n to the		
1. Bergson, H. (1983). Creative evolution. University Press of America. 2. Sparke, P. (2013). An introduction to design and culture: 1900 to the present. Rout ledge. 3. H. Kumar Vyas (2007) "Design the International Movement with Indian										
Parallel". 4. Robert										
T. KUUCI I										

Course Name	,	 Internal		End	Exam	Work	Pract	tal -	
			Theor	y		Толго		То	
			Exa	minatio	on Schem	ie			
Communic	Canon	Design							
Communi	cation	Design	1	y	Studio 	y	0	tal	
Cou	rse Na	me		Ho	ours)		1		
	Te	aching S	Schem			ı			
k along with ev	valuatio	n report	to be	oreserve	ed till the	next exa	minati	on	
ment.	Схиппп	unon to	oc doi	ic oasea	on the pe	710111III	100 01		
	examin	ation to	he dor	ne hased	on the ne	erforma	nce of		
<u> </u>	arks								
		practical	exami	nation s	hall be as	follows	3:		
-T	6-11								
examination									
Marks									
	work-2	25							
	<u> </u>	I	<u> </u>	<u> </u>		<u> </u>	<u> </u>		
i 1	k- 20 Marks Marks examination will be given a completed within ion of marks for ignment: 15 marks f practical/oral ment. k along with every communication of marks for ignment with a communication of	k- 20 Marks Marks examination will be given a practic completed within a give complete completed within a give completed within a give completed within a give complete comp	Marks examination will be given a practical assignment agiven time agiven time agiven of marks for oral-practical ignment: 15 marks is for practical/oral examination to ment. k along with evaluation report Teaching S Course Name Communication Design	k- 20 Marks Marks examination will be given a practical assignment ompleted within a given time and assignment ignment: 15 marks ks f practical/oral examination to be dorment. k along with evaluation report to be practical or to be practical or to be practical. Teaching Schem Course Name Communication Design 1 Examination	k- 20 Marks Marks examination will be given a practical assignment on the bompleted within a given time and assessed by sion of marks for oral-practical examination signment: 15 marks ks f practical/oral examination to be done based ment. k along with evaluation report to be preserved Teaching Scheme Course Name Communication Design 1 Examination Theory	k- 20 Marks Marks examination will be given a practical assignment on the basis of the ompleted within a given time and assessed by examination of marks for oral-practical examination shall be assignment: 15 marks ks f practical/oral examination to be done based on the perment. k along with evaluation report to be preserved till the Teaching Scheme Course Name Communication Design 1 Examination Scheme Theory	k- 20 Marks Marks examination will be given a practical assignment on the basis of the above ompleted within a given time and assessed by examiners during ion of marks for oral-practical examination shall be as follows ignment: 15 marks ks f practical/oral examination to be done based on the performanment. k along with evaluation report to be preserved till the next examination to be done based on the performanment. Course Name Contact Hours Credit Hours	Name Name	k- 20 Marks Marks examination will be given a practical assignment on the basis of the above exercises ompleted within a given time and assessed by examiners during the oral ion of marks for oral-practical examination shall be as follows: ignment: 15 marks ks f practical/oral examination to be done based on the performance of ment. k along with evaluation report to be preserved till the next examination Teaching Scheme Course Name Contact Hours Credits Assigned Theory Studio y o tal tal Communication Design 1 2 2 2 Examination Scheme Course Name Course Name

					Exam	n (in Hrs)					
		Test 1	Test 2	Avg.							
BDL302	Communication Design 1						25	25	50		
	C	ourse (Outcom	es/Obj	ectives						
The Course				•	<u> </u>						
1	To develop an a effective comm			visua	commu	nication	means f	or			
2	To develop an a	bility t	o design	visua	commu	nication	in vario	us forn	ıs.		
	1										
Course Out	comes: The learne	er will 1	ne able to	Ω	<u> </u>		<u>I</u>	I	<u> </u>		
1	Develop thinkir effective comm	ng of us	ing sem		semanti	cs and ot	her tools	s for			
2	Develop the ski subjectivity for			-	_	sthetics,	emotion	and			
3	Use the tools of	visual	commu	nicatio	n.						
4	Develop commi	unicatio	on design	n using	yisual l	pasics and	d visual	langua	ge.		
5	Understand the										
		•									
Sr.No.	Module			Det	ailed Co	ontent			Ho ur s		
I	Introduction to communicatio n design	typogr	aphy and			otics, sem to Comm			7		
II	Effective Communicati on through perception		etics, Em			uman Per jectivity,		,	7		
III	Visual Communicati on	_				cal Illusio , Motion			8		
IV	Visual Language	Pragm and Lo Order,	sual Language: Semiotics - Semantics, Syntactic, agmatics, Sign - Design of Icon, Index, Symbol I Logo. Visual Hierarchy: Visual Focal, Visual der, Eye Movement, Visual Flow and Continuity, sual Composition.								

V	Information Design	Visual Applic	Abstrac	tion of Gestal	Quanti t Laws	tion Chur tative info of groupin	ormation	8	

Note: Suggested List of Experiments is indicative. However, flexibility lies with individual course instructors to design and introduce new, innovative and challenging experiments, / Lab work (limited to maximum 30% variation to the suggested list) from within the curriculum, so that the fundamentals and applications can be explored to give greater clarity to the students and they can be motivated to think differently.

Text Books and References:

- 1. Malamed, C. (2011). Visual language for designers: principles for creating graphics that people understand. Rockport Pub.
- 2. Arnheim, R. (1969). Visual thinking. Univ of California Press.
- 3. Bertin, J. (1981). Graphics and graphic information processing. Walter de Gruyter.
- 4. Barry, A. M. (1997). Visual intelligence: Perception, image, and manipulation in visual communication. SUNY Press
- 5. Meirelles, I. (2013). Design for information: an introduction to the histories, theories, and best practices behind effective information visualizations Rockport publishers.

Assessment:

Distribution of marks for term work-25

Laboratory work- 20 Marks

Attendance- 05 Marks

Practical/Oral examination

- 1. Each student will be given a practical assignment on the basis of the above exercises which will be completed within a given time and assessed by examiners during the oral examination.
- 2. The distribution of marks for oral-practical examination shall be as follows:
- a. Practical Assignment: 15 marks
- b. Oral: 10 marks
- 3. Evaluation of practical/oral examination to be done based on the performance of practical assignment.
- 4. Students work along with evaluation report to be preserved till the next examination

	Teaching Schen	ıe					
Course Code	Convey Norma	,	ontact ours)	Credit	s Assig	ned	
Course Code	Course Name	Theor	Studio	Theor	Studi	To	
		y	Studio	$ \mathbf{y} $	0	tal	
BDL303	Model Making Workshop-I	2		2		2	

				Exa	minatio	on Schem	ıe			
				Theo	y		Term		То	
Course Code	Course Name		Internal ssessme		End Sem Exam	Exam Duratio n (in Hrs)	Work	Pract	tal	
		Test 1	Test 2	Avg.						
BDL303	Model Making Workshop-I						50	50	10 0	
		ourse (Outcom	es/Obj	ectives					
The Course A				1 1		• ,		C 1 C		
1	To identify tool Model making.	s, work	materia	I and I	neasurii	ng ınstrun	nents us	etul for	•	
Course Oute	omes: The learne	er will 1	he able t							
1	Gain basic work models.				Take mo	odels of va	arious fo	orms pa	per	
2	Gain basic work	king kn	owledge	and M	Iake mo	dels from	terraco	tta and		
3	Gain basic work	king kn	owledge	and n	ake mo	dels from	plaster	of pari	S	
4	Gain basic work	king kn	owledge	and m	ake mo	dels from	wood			
5	Gain basic work	king kn	owledge	and m	nake mo	dels from	metal			
Sr. No.	Module			Det	ailed C	ontent			Ho ur s	
I	Paper model	metho		etric a	nd orga	surface onic forms	_		7	
п	Terracotta and plasticine clay	as a m sculpti	aterial, t	ools us other 1	sed for c	: Introdu clay mode using clay	ling, ma	aking	7	
Ш	Plaster of Paris	Plaster	of Paris g PoP to	: Wor	_	th PoP as , Sanding			8	

Course Code	Course Name	Term Work Pract tal								
				Exa	minatio	on Schem	ie			
BDL304	Mini	Projec	ιIA			4		2	2	
DDI 204	N #2 2	Duotos	4 1 A		y		y	0	tal	
Course Code	Cou	rse Na	me		Theor	ours) Studio	Theor	Studi	To	
			<u> </u>		(Co	ntact	Credit	s Assig	ned	
		Te	aching S	Schem	e		1	I		
4. Students wo	ork along with ev	valuatio	n report	to be j	oreserve	ed till the	next exa	amınati	on	
practical assign		1		, 1		1 ,111 .1		• ,•		
	of practical/oral	examin	ation to	be dor	ne based	on the po	erformai	nce of		
b. Oral : 20 ma										
	signment: 30 m		nacical	CAAIIII	11411011 8	nan be as	OHOWS			
	tion of marks fo	r oral.r	ractical	evami	nation a	hall be as	follows	2.	\dashv	
which will be examination.	completed withi	n a give	en time a	and ass	essed b	y examin	ers durii	ng the c	oral	
	t will be given a	-	_							
	l examination									
Laboratory wo Attendance- 0:										
Distribution of Laboratory wo	f marks for term ork- 45 Marks	work-	ou .							
Assessment:	Carantra Constan		50							
	nd References:									
motivated to	think differentl				-					
	an be explored								be	
	xperiments, / La) from within th								•	
	urse instructors		_							
	ed List of Expe						-			
			ishing n	_		s welding), ponsi	inig		
V	Metal	_		-		asic weld	_	-	8	
				_		ike angle	-			
						nt types o				
	Wood	joineri	es, turni	ng and	facing	operation	s with w	ood.	8	

		Internal Assessment		End Sem Exam	Exam Duratio n (in Hrs)						
		Test 1	Test 2	Avg.							
BDL304	Mini Project 1A						25	25	50		
		ourse (Outcom	es/Obj	ectives						
The Course											
1		1. To acquaint with the process of identifying the needs and converting it									
1	into the problem		**************************************	المامة	o 4le a es	noblo !	0.00000				
2	2. To familiarize								1		
2	3. To acquaint v				plying b	asic Desig	gn tunda	amenta	.IS		
3	to attempt solut: 4. To inculcate				rning or	nd recepted	<u></u>				
4	4. 10 incurcate	me pro	Less of s	en-iea	innig al	iu researc	11.				
	Expected Co						e,				
1	• •	Identify problems based on societal /research needs.									
2	Apply Knowledge and skill to solve societal problems in a group.										
3	Develop interpersonal skills to work as member of a group or leader.										
4	Draw the proper experimental/sin			m avai	lable re	sults throu	igh theo	retical	/		
	Analyse the imp			s in so	rietal an	d environ	mental	contex	t for		
5	sustainable deve			3 111 300	cictai ai	id Ciiviioii	memai	contex	101		
6	Excel in written			nunicat	ion.						
	Demonstrate ca					group. w	hich lea	ds to			
7	lifelong learning		-5 51 501		o u	0P, W	10u				
8	Demonstrate pr		anagem	ent pri	nciples	during pro	ject wo	rk.			
		•			-						
Guidelines 1	for Mini Project	<u> </u>	<u> </u>	l .	<u> </u>	<u> </u>	<u> </u>	<u>I</u>	1		
	shall form a group	of 3 to	4 studer	nts. wh	ile form	ning a groi	up shall	not be			
	than three or more							110000			
	should do survey a							o prob	lem		
	r mini project in co		-					•			
	internal committee										
	nall submit implen		-		orm of (Gantt/PER	T/CPM	chart,			
	over weekly activi										
_	k to be prepared by ide/supervisor can	_	-				weekly	work			
	pervisor may give						4 !!4	. 1			

focus shall be on self-learning.

- 6. Students in a group shall understand problem effectively, propose multiple solution and select best possible solution in consultation with guide/ supervisor.
- 7.Students shall convert the best solution into working model using various components of their domain areas and demonstrate.
- 8. The solution to be validated with proper justification and report to be compiled in standard format of University of Mumbai.
- 9. With the focus on the self-learning, innovation, addressing societal problems and entrepreneurship quality development within the students through the Mini Projects, it is preferable that a single project of appropriate level and quality to be carried out in two semesters by all the groups of the students. i.e. Mini Project 1 in semester III and IV. Similarly, Mini Project 2 in semesters V and VI.
- 10. However, based on the individual students or group capability, with the mentor's recommendations, if the proposed Mini Project adhering to the qualitative aspects mentioned above gets completed in odd semester, then that group can be allowed to work on the extension of the Mini Project with suitable improvements/modifications or a completely new project idea in even semester. This policy can be adopted on case by case basis.

Guidelines for Assessment of Mini Project:

Term Work

- 1. The review/ progress monitoring committee shall be constituted by head of departments of each institute. The progress of mini project to be evaluated on continuous basis, minimum two reviews in each semester.
- 2. In continuous assessment focus shall also be on each individual student, assessment based on individual's contribution in group activity, their understanding and response to questions.
- 3. Distribution of Term work marks for both semesters shall be as below;

Marks awarded by guide/supervisor based on log book: 10

Marks awarded by review committee: 10

Quality of Project report: 05

Review/progress monitoring committee may consider following points for assessment based on either one year or half year project as mentioned in general guidelines.

One-year project:

- 1. In first semester entire theoretical solution shall be ready, including components/system selection and cost analysis. Two reviews will be conducted based on presentation given by students group.
- -- First shall be for finalization of problem
- -- Second shall be on finalization of proposed solution of problem.

- 2. In second semester expected work shall be procurement of component's/systems, building of working prototype, testing and validation of results based on work completed in an earlier semester.
- -- First review is based on readiness of building working prototype to be conducted.
- -- Second review shall be based on poster presentation cum demonstration of working model in last month of the said semester.

Half-year project:

- 1. In this case in one semester students' group shall complete project in all aspects including,
- Identification of need/problem
- Proposed final solution
- Procurement of components/systems
- Building prototype and testing
- 2. Two reviews will be conducted for continuous assessment,
- First shall be for finalization of problem and proposed solution
- Second shall be for implementation and testing of solution.

Assessment criteria of Mini Project

Mini Project shall be assessed based on following criteria;

- 1. Quality of survey/ need identification
- 2. Clarity of Problem definition based on need.
- 3. Innovativeness in solutions
- 4. Feasibility of proposed problem solutions and selection of best solution
- 5. Cost effectiveness
- 6. Societal impact
- 7. Innovativeness
- 8. Cost effectiveness and Societal impact
- 9. Full functioning of working model as per stated requirements
- 10. Effective use of skill sets
- 11. Effective use of standard engineering norms
- 12. Contribution of an individual's as member or leader
- 13. Clarity in written and oral communication

In one year, project, first semester evaluation may be based on first six criteria's and remaining may be used for second semester evaluation of performance of students in mini project.

In case of half year project all caperformance of students in mini	_	e may be conside	ered for evaluation	on of
Guidelines for Assessment of l				
1. Report should be prepared as	per the guideline	s issued by the U	Jniversity of Mu	mbai.
 Mini Project shall be accessed model by the student project gro preferably from industry or rese years approved by head of Instit 3. Students shall be motivated to 	oup to a panel of larch organization ution.	Internal and Extensions having experie	ernal Examiners ence of more tha	
Conferences/students competition				

Program Structure for Second year Bachelor of Design in Design SEMESTER IV

University of Mumbai

(With Effect from 2023-2024)

Course Code	Course Name	Teaching Scheme (Contact Hours)			Credits Assigned			
		Theory	Tutorial	Studio	Theory	Studio	Total Credits	
BDC401	Design Research Including User Study	3	1		3		3	
BDC402	Packaging Design and Branding	3	1*		4		4	
BDC403	Interior Landscape Design	3	1*	1	4		4	
BDC404	Industrial Design -II	3	1*		4		4	
BDC405	Communication Design -II	2			2		2	
BDL401	Design Research Including User Study			2		1	1	
BDL402	Communication Design -II			2		1	1	

BDL403	Model Making Workshop-II			4		2	2	
BDL404	Mini Project 1 B			4		2	2	
Total		14	3	12	17	6	23	

		Examination Scheme									
Course Code	Course Name	Internal Assessment			End Sem	Exam Durati on	Term Work	Pract/ Oral	Total		
		Test 1	Test 2	Avg	Exam	(Hrs)					
		20	20	20	80	3	50	50	100		
BDC401	Design Research Including User Study	20	20	20	80	3	-1		100		
BDC402	Packaging Design and Branding	20	20	20	80	3			100		
BDC403	Interior Landscape Design	20	20	20	80	3			100		
BDC404	Industrial Design -II	20	20	20	80	3	-		100		
BDC405	Communication Design -II	20	20	20	80	3			100		
BDL401	Design Research Including User Study						25	25	50		
BDL402	Communication Design -II						25	25	50		
BDL403	Model Making Workshop-II						50	50	100		
BDL404	Mini Project 1 B						25	25	50		
Total				100	400		125	125	750		

Teaching Scheme										
Course Code	Common Norman	(Conta	ct Hours)	Credits Assigned						
	Course Name	Theory	Studio	Theory	Studio	Total				
BDC401	Design Research Including User Study	3		3		3				

					Exam	ination Sch	eme		
				Т	heory		Term	Pract	Total
Course Code	Course Name		Internal Assessment		End Sem Exam	Exam Duration (in Hrs)	Work	77460	1044
		Test 1	Test 2	Avg.					
BDC401	Design Research Including User Study	20	20	20	80	3			100
	Со	urse (Outco	mes/O	bjectives				
Course Objectives	S				-				
1	To understand the im	nportai	nce of	resear	ch in deve	eloping solut	ion		
2	To finding out the su	itable	resear	ch too	1				
Course Outcomes	Learner will be able t								
1	Identify the qualitative	ve and	quant	titative	methods	of research			
2	Design the framewor	k of re	esearc	h to de	evelop a so	olution			
3	Develop solutions ba	ised or	n refer	ences	and obser	vations			
4	Use photography as	effecti	ve too	ol to do	the resea	rch			
5	Portray research find	lings u	sing p	ersona	, stories a	nd scenarios	i T	T	
Sr.No.	Module				Detaile	d Content			Hours
I	Research Methods	thods Qualitative and quantitative research methodology,						y,	7
II	Research Tools							sting,	7
III	Research Analysis					vity analysis	,		8

IV	Photography as a tool	Photo	ograpł	ny as a	tool in de	sign research	n etc		8
V	Persona	Perso	ona, sc	enario	, story bo	arding.			8
Text Books and	References:	- I				•		l.	I.
Zimme 3. Creswell, J.	(2003). Design resear rman, J., Binder, T., through practice: H W., & Clark, V. L. P , J. W. (2013). Resear	Redsti From t . (2007 rch de	rom, J he lab 7). Des sign: (I., &W o, field signing Qualit	ensveen, , and sho g and con	S. (2011). D wroom. Else ducting mix antitative, an	esign rese evier. ed metho	earch ods resea	arch.
Internal Assessn	nent (IA) for 20 mark			<i>-</i> 1					
Question paper 1 • Question • Remain	Cormat estion Paper will comp Q.1 will be compulsoning questions will be nodules. For example,	rise of ory and	a total should in na	l of siz	question er maximu	s each carryi im contents ond part (b) of	ng 20 ma of the syll Teach que	rks. abus stion mu	ıst be
from different in	other Module						rt (<i>b)</i> mus	ot oc 1101	ii aiiy
	• A tota	l of fo	ur qu	estions	s need to b	e answered			
	T	Te	achin	g Sche			Γ		
Course Code	Course	Name				ct Hours)	Cred	its Assig	1
	000250				Theory	Studio	Theory	Studio	Total
BDC402	Packaging Design	n and	Brand	ling	4		4		4
					Exam	ination Sch	eme		
Course Code	Course Name						Pract	Total	

			Internal Assessment		End Sem Exam	Exam Duration (in Hrs)			
		Test 1	Test 2	Avg.					
BDC402	Packaging Design and Branding	20	20	20	80	3			100
	Co	urco (Jutoo	mos/O	bjectives				
Course Objectives		ui se C	Juico	ines/O	<u> </u>				
1	To understand the pr	inciple	es of p	ackagi	ing techni	ques.			
2	To make learner able								
Course Outcomes	•								
1	Identify the key elemand audience.	ents o	f a pa	ckagin	g compos	ition includi	ng placen	nent, pro	duct,
2	Identify the production packaging designs.	on, des	sign, a	and bu	dgetary di	fferences be	tween ma	ss and pi	restige
3	Understand and discu	ıss ho	w a pr	oduct	line is dev	veloped, upd	ated, and	expande	d.
4	Develop an understartypography, balance, color, and other attrib		of hov	w playi	ful packag	ging design is	s created t	through	
5	Develop an understar and user profiles affect the par	nding				marketing re	search, ta	rget audi	ences,
Sr. No.	Module				Detaile	d Content	,		Hours
I	Seeing in 3D	Produ Packa	ict Lir aging (nes, Pr	oject - Ch e: Finding	and Promot ampagne car packaging s	ton OR		7

II	Mass vs. Prestige	Digit Desig		ge Ma	nipulatior	n Application	ns. Playfu	1	7
III	Packaging Research					nceptualizat – Soft drinks			8
IV	Packaging Forms	Packaging Design Realization, Packaging Form and Elements.						and	8
V	New Product Design	Laun	Packaging Design Approaches and Techniques. Launching a New Product Design, Project - Ladies cosmetics packaging design						
Text Books and R	eferences:								
Text Books and R	erer enees.								
1. Van Roojen, P., &Hronek, J. (2010). Basic Packaging. Pepin Press. 2. Denison, E., &Ren, G. Y. (2001). packaging									
prototypes 3: Thinking Green (Vol. 3). RotoVision.									
4. Pecht, M. (1991). Handbook of electronic package design (Vol. 76). CRC Press. style (Vol. 127). Point Roberts: Hartley & Marks.									
5.Bringhurst, R. (1992). The elements of typographic style (Vol. 127). Point Roberts: Hartley & Marks.									

Internal	Assessment ((IA)) for	20	marks:
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IA will consist of Two Compulsory Internal Assessment Tests. Approximately 40% to 50% of syllabus content must be covered in First IA Test and remaining 40% to 50% of syllabus content must be covered in Second IA Test

Question paper format

- Question Paper will comprise of a total of six questions each carrying 20 marks.
- Q.1 will be compulsory and should cover maximum contents of the syllabus
- Remaining questions will be mixed in nature (part (a) and part (b) of each question must be from different modules. For example, if Q.2 has part (a) from Module 3 then part (b) must be from any other Module randomly selected from all the modules)
 - A total of **four questions** need to be answered

	Teaching Scheme									
Course Code	Canna Nama	(Contact Hours) Credits Assigned								
Course Code	Course Name	Theory	Studio	Theory	Studio	Total				
BDC403	INTERIOR LANDSCAPE DESIGN	4		4		4				

					Exam	ination Sch	eme		
			Theory					Dwoot	Total
Course Code	Course Name	Internal Assessment End Exam Duration (in Hrs)				Pract	1 Otal		
		Test 1	Test 2	Avg.					
BDC403	INTERIOR LANDSCAPE DESIGN	20	20	20	80	3			100

	Co	urse (Outco	mes/O	bjectives				
Course Objectiv	res								
1	To study the concept interior spaces.								
2	To develop an undergemphasis on the choice	ice and	l care	of plai	nt materia	ls used in the	interior	spaces.	
3	To study about the vaspaces.	arious	lands	caping	elements	and their ap	plication	in interio	or
Course Outcome	e: Learner will be able	to							
1	Select various element			or land	scaping				
2	Understand the plant	growt	h, hea	ılth, re	guirement	s and mainte	enance tec	chniques	<u> </u>
3	Select various elementartifcts, lights,texture	nts of	interio	or land					
4	Select design, materi	als, wa	ater pı	coofing	solutions	for roof & l	Deck Lan	dscaping	3
5	Apply knowledge to	design	cour	tyard,	terrace an	d outer room	ns.		
Sr. No.	Module				Detaile	d Content			Hours
I	INTERIOR LANDSCAPING	their	function rercial	ons, la	yout & co	plants, indo mponents, F lection of pl	loricultur	e -	7
П	PHYSICAL REQUIREMENTS OF PLANTS	water acclin	, plan natiza	ting m	edium, so maintena	ants - light, t il separator, nce. Technic	weight of	plants,	7
III	INTERIOR LANDSCAPING ELEMENTS & PRINCIPLES	pools. & ligh	, foun hting,	tains, desigr	cascades p	g elements - plants, rocks, es -pant textu	artifacts,	paving	8
IV	ROOF AND DECK LANDSCAPE	provis irriga	sions t	for dra selectio	inage, ligl on of mate	nt weight pla rials, water p	inting me		8
V	EXERCISE ON INTERIOR LANDSCAPE	INTERIOR • An outdoor room design						8	
Text Books and	References:	1	<u> </u>	1			<u>I</u>	1	.1

1. Time saver standards for landscape architecture.							
2. Planting design by Theodore D.Walker, VNR Publications New							
York. 3. Landscaping Principles and Practices by Jack E. Ingels, Delmar							
Publishers.							
Internal Assessmen	nt (IA) for 20 marks	<u> </u>		<u> </u>			
		in Second I	A Test				
• Quest	tion Paper will compr Q.1 will be compulson ng questions will be n	ise of a total or ry and should or mixed in natu	f six question cover maximu re (part (a) an	im contents and part (b) of	of the syll f each que	abus stion mu	
• Quest	tion Paper will compr Q.1 will be compulson	rise of a total or ry and should or mixed in nature of Q.2 has part (f six question cover maximu re (part (a) an (a) from Mode	am contents and part (b) or the ule 3 then part	of the syll f each que	abus stion mu	
• Quest	tion Paper will compr Q.1 will be compulsor ng questions will be a dules. For example, if other Module ra	rise of a total or ry and should or mixed in nature of Q.2 has part (f six question cover maximu re (part (a) and (a) from Modited from all the	am contents and part (b) of the ule 3 then part (b) are modules)	of the syll f each que	abus stion mu	
• Remainin	tion Paper will compr Q.1 will be compulsor ng questions will be a dules. For example, if other Module ra	rise of a total or ry and should or mixed in natural f Q.2 has part or andomly select	f six question cover maximu re (part (a) and (a) from Moduleted from all the constant of the c	am contents and part (b) of the ule 3 then part (b) are modules)	of the syll f each que	abus stion mu	
• Quest	tion Paper will compr Q.1 will be compulsor ng questions will be a dules. For example, if other Module ra	ise of a total or ry and should or mixed in nature f Q.2 has part (andomly select	f six question cover maximu re (part (a) and (a) from Mode ted from all the ions need to be scheme	am contents and part (b) of ule 3 then pa ne modules) be answered	of the syll f each que art (b) mus	abus estion mu est be fron	n any
• Quest • (tion Paper will compr Q.1 will be compulsor ng questions will be a dules. For example, if other Module ra	rise of a total or ry and should or mixed in natural f Q.2 has part of andomly select of four quest Teaching S	f six question cover maximu re (part (a) an (a) from Mode ted from all th ions need to b	am contents and part (b) or ule 3 then pa ne modules) be answered act Hours)	of the syll f each que art (b) mus	abus stion mu st be from	n any
• Quest • (a) • Remaining from different mo	tion Paper will compression Paper will be compulsor on questions will be a dules. For example, if other Module rate A total	rise of a total or ry and should or mixed in natural f Q.2 has part of andomly select of four quest Teaching S	f six question cover maximu re (part (a) and (a) from Mode ted from all the ions need to be scheme	am contents and part (b) or ule 3 then pa ne modules) be answered act Hours)	of the syll f each que art (b) mus	abus estion mu est be fron	n any
• Quest • Quest • Remaining from different mo Course Code	tion Paper will compression Paper will be compulsor on questions will be adules. For example, if other Module rate A total	rise of a total or ry and should or mixed in natural f Q.2 has part of andomly select of four quest Teaching S	f six question cover maximu re (part (a) an (a) from Mode ted from all th ions need to b cheme (Conta Theory	am contents and part (b) or ule 3 then pa ne modules) be answered act Hours)	of the syll f each que art (b) mus Cred Theory	abus stion mu st be from	n any ned Total
• Quest • Quest • Remaining from different mo Course Code	tion Paper will compression Paper will be compulsor on questions will be adules. For example, if other Module rate A total	rise of a total or ry and should or mixed in natural f Q.2 has part of andomly select of four quest Teaching S	f six question cover maximu re (part (a) an (a) from Mode ted from all th ions need to b cheme (Conta Theory 4	am contents and part (b) or ule 3 then pa ne modules) be answered act Hours)	Credi	abus stion mu st be from	n any ned Total

			ntern: sessm		End Sem Exam	Exam Duration (in Hrs)			
		Test 1	Test 2	Avg.					
BDC404	Industrial Design II	20	20	20	80	3			100
	Со	urse (Outco	mes/O	bjectives				
Course Objectives									
1	To make the learner	able to	make	e innov	ative desi	ign solutions	for indus	trial pro	blems.
Course Outcome:	Learner will be abl t						1.01		
1	Develop innovative of	design	s by d	oing u	ser study	and need ide	ntificatioi	1.	
2	Do the design analys analysis.	is con	siderii	ng usal	oility, mat	erial analysi	s, visual a	nalysis,	factor
3	Develop designs solu for manufacture, des			_		•	sign for c	ulture, d	lesign
Sr.No.	Module				Detaile	d Content			Hours
I	Complex products design	innov		design		ns a strategic user study, 1		gn and	7
П	Sigma analysis					product activalysis, factor		ility,	7
III	Analysis of design factors	analy	sis, ec	onomi		cal analysis, s, ideation, and design.		ental	8

IV	Design Considerations	Design for culti assembly, prod- final manufactu	act renderin				8
Text Books and R	References:	1 1		l			
). Engineering design arlow, V. M., & Bentl						
	aksenberg, I. (2013). T ial Designers Need to		0		fication B	ook:	
4. Krippendorff, K	. (2005). The semantic	c turn: A new for	ındation for	design. crc	Press.		
Internal Assessme	ent (IA) for 20 marks	s:					
• Ques	Q.1 will be compulso ing questions will be odules. For example, i	ory and should co	ver maximue (part (a) a) from Mod d from all t	im contents and part (b) of ule 3 then part the modules)	of the syll f each que	abus estion mu	
• Ques	Q.1 will be compulso ing questions will be odules. For example, i	ory and should comixed in nature of Q.2 has part (a randomly selecte	ver maximue (part (a) a) from Mod d from all t	im contents and part (b) of ule 3 then part the modules)	of the syll f each que	abus estion mu	
• Ques • Remain	Q.1 will be compulso ing questions will be odules. For example, i	ory and should comixed in nature of Q.2 has part (a randomly selecte	ver maximule (part (a) a) from Mod d from all to	im contents and part (b) of ule 3 then part the modules)	of the syll f each que	abus estion mu	
• Ques • Remain from different me	Q.1 will be compulsooning questions will be odules. For example, in other Module 1 A tota	mixed in nature if Q.2 has part (a randomly selecte l of four questio Teaching Sc	ver maximule (part (a) a) from Mod d from all the ns need to be heme (Conta	am contents and part (b) or ule 3 then part are modules) be answered act Hours)	of the syll f each que art (b) mus	abus estion mu	n any
• Ques	Q.1 will be compulso ing questions will be odules. For example, i	mixed in nature if Q.2 has part (a randomly selecte l of four questio Teaching Sc	ver maximule (part (a) a of from Mod d from all to the me	am contents and part (b) or ule 3 then part are modules) be answered act Hours)	of the syll f each que art (b) mus	abus estion mu st be froi	n any
• Ques • Remain from different me	Q.1 will be compulsooning questions will be odules. For example, in other Module 1 A tota	mixed in nature if Q.2 has part (a randomly selecte l of four questio Teaching Sc Name	ver maximule (part (a) a) from Mod d from all the ns need to be heme (Conta	am contents and part (b) or ule 3 then part are modules) be answered act Hours)	of the syll f each que art (b) mus	abus estion must be from	n any
• Ques • Remain from different me	Q.1 will be compulsor ing questions will be odules. For example, in other Module in A total	mixed in nature if Q.2 has part (a randomly selecte l of four questio Teaching Sc Name	ver maximule (part (a) a a) from Modd from all the selection of the select	am contents and part (b) or ule 3 then part and modules) be answered act Hours) Studio	of the syll f each que art (b) must Cred Theory	abus estion must be from	n any
• Remain from different me	Q.1 will be compulsor ing questions will be odules. For example, in other Module in A total	mixed in nature if Q.2 has part (a randomly selecte l of four questio Teaching Sc Name	ver maximule (part (a) a a) from Modd from all the selection of the select	am contents and part (b) or ule 3 then part and modules) be answered act Hours) Studio	of the syll f each que art (b) must Cred Theory	abus estion must be from	n any

BDC405	Communication	Internal Assessment Test 1 Test 2 Avg. 20 20 20		End Sem Exam	Exam Duration (in Hrs)			100	
220.00	Design -II								100
	Course Outcomes/Objectives								
Course Objectives	3				-				
1	The aim of this course is to make the learner aware about the application of visit design to solving communication design problems using advanced techniques.							ıal	
	: Learner will be abl			<u> </u>	1'	1, 1			
1	Understand the differ							.in +1	mt ar-4
2	Understand design as of our society.	s appii	eu 10 9	sorving	g commun	ncauon prob	ieilis With	ш те сс	mext
3	Understand the Ident	ity De	sign.						
4	Design and create us								
5	Design communicati	on for	ms usi	ing vid	leography	and cinemat	ography.	ı	
Sr. No.	Module				Detaile	d Content			Hours
I	Introduction to Print Media	and E	evoluti	on Int	errelation	: Forms of P of Print and . Introductio	Digital	·	7
II	History and Evolution	Legib	oility F	Readab	ility, Wor	ssification, A d mark Desi Applications	gn, Type	Design	7
Ш	Introduction to Identity Design	Rebra Temp	anding	g; Appl Design,	lications in	sign, Brandir n - Stationary Design, Sig	y Design,	ign and	8
IV	User Interface Design	Introd User	duction	n to Hi ace, Cl		nputer Interfaics, Principle		hic	8

V	Introduction to Moving pictures:	of Ci	nema,		and Anin	tures: Histor nation; Princ	•		8
Text Books and R	oforonoos								
	eierences:	1	1	1		1	1	1	
1. Kipphan, H. (2001). Handbook of print media:									
technologies and production									
methods. Springer Science & Business Media.									
2. Kernan, A. B. (1987). Printing Technology, Letters, & Samuel Johnson. Princeton University Press.									
3. McLean, R. (1988). The Thames and Hudson manual of typography.									
4. Craig, J. (1990). Basic Typography: a design manual. Watson-Guptill Publications.									
Internal Assessme	nt (IA) for 20 mark	s:							

IA will consist of Two Compulsory Internal Assessment Tests. Approximately 40% to 50% of syllabus content must be covered in First IA Test and remaining 40% to 50% of syllabus content must be covered in Second IA Test

Question paper format

- Question Paper will comprise of a total of six questions each carrying 20 marks.
- Q.1 will be compulsory and should cover maximum contents of the syllabus
- Remaining questions will be mixed in nature (part (a) and part (b) of each question must be from different modules. For example, if Q.2 has part (a) from Module 3 then part (b) must be from any other Module randomly selected from all the modules)
- A total of **four questions** need to be answered

	1	Te	achin	g Sche	me		'			
Course Code	Course	.To o			(Conta	ct Hours)	Cred	its Assig	ned	
Course Code	Course I	vame			Theory	Studio	Theory	Studio	Total	
BDL401	Design Research		ling U	Jser		2		1	1	
-	Study	lab								
			Examination Scheme							
			Theory Term P							
Course Code	Course Name	As	ntern: sessm	ent	End Sem Exam	Exam Duration (in Hrs)	Work	Pract	Total	
		Test 1	Test 2	Avg.						
BDL401	Design Research Including User Study lab						25	25	50	
				mes/O	bjectives					
	Learner will be able t									
1	Identify the qualitativ									
2	Design the framewor				•					
3	Develop solutions ba									
4	Use photography as									
5	Portray research find	ıngs u	sing p	ersona	, stories a	nd scenarios	<u> </u>			
Sr. No.	Module				Detaile	d Content			Hours	

I	Research Methods	Qualit	ative	and q	ıantitativ	e research	methodo	logy,	4
II	Research Tools	_	estionnaire design, validation, repeatability testing, rchophysical scales,						4
III	Research Analysis	Direct	rect observation and activity analysis,						4
IV	Photography as a tool	Photo	graph	y as a	tool in de	esign resea	arch etc		4
V	Persona	Person	ersona, scenario, story boarding.						4

Note: Suggested List of Experiments is indicative. However, flexibility lies with individual course instructors to design and introduce new, innovative and challenging experiments, / Lab work (limited to maximum 30% variation to the suggested list) from within the curriculum, so that the fundamentals and applications can be explored to give greater clarity to the students and they can be motivated to think differently.

Assessment:

Distribution of marks for term work-25

Laboratory work- 20 Marks

Attendance- 05 Marks

Practical/Oral examination

- 1. Each student will be given a practical assignment on the basis of the above exercises which will be completed within a given time and assessed by examiners during the oral examination.
- 2. The distribution of marks for oral-practical examination shall be as follows:
- a. Practical Assignment : 15 marks
- b. Oral: 10 marks
- 3. Evaluation of practical/oral examination to be done based on the performance of practical assignment.
- 4. Students work along with evaluation report to be preserved till the next examination

	Teaching Scheme									
C C- 1-	Carrena Name	(Conta	ct Hours)	Credi	its Assig	ned				
Course Code	Course Name	Theory	Studio	Theory	Studio	Total				
BDL402	Communication Design-II	2		2		2				

		Examination Scho	eme		
Course Code	Course Name	Theory	Term Work	Pract	Total

	T								
			ntern: sessm		End Sem Exam	Exam Duration (in Hrs)			
		Test	Test 2	Avg.					
BDL402	Communication Design-II						25	25	50
	Со	urse (Outco	mes/O	bjectives				
The Course Aims			rse Outcomes/Objectives						
	To develop an ability	to de	sign v	isual c	ommunic	ation means	for effect	ive	
1	communication.								
2	To develop an ability	to de	sign v	isual c	ommunic	ation in vario	ous forms		
Course Outcomes	: Learner will be able	to		I				I.	I
1	Solve the real life pro			pplying	g the princ	ciples of com	municati	on desig	n.
Sr. No.	Module				Detaile	d Content			Hours
		and so	olve it	during		munication c se with discu tors.			

Note: Suggested List of Experiments is indicative. However, flexibility lies with individual course instructors to design and introduce new, innovative and challenging experiments, / Lab work (limited to maximum 30% variation to the suggested list) from within the curriculum, so that the fundamentals and applications can be explored to give greater clarity to the students and they can be motivated to think differently.

Text	Rool	zc	hne	Refe	ren	CPC.
I CXL	DUU		anu	17616		11.55

1. Malamed, C.					
(2011). Visual					
language for					
designers:					
principles for					
creating graphics					
that people					
understand.					
Rockport Pub.					
2.Arnheim, R.					
(1969). Visual					
thinking. Univ of					
California Press.					
3. Bertin, J. (1981).					
Graphics and					
graphic					
information					
processing. Walter					
de Gruyter.					
4. Barry, A. M.					
(1997). Visual					
intelligence:					
Perception, image,					
and manipulation					
in visual					
communication.					
SUNY Press					

5. Meirelles, I. (2013). Design for information: an introduction to the histories, theories, and best practices behind effective information visualizations. Rockport publishers.

Assessment:

Distribution of marks for term work-25

Laboratory work- 20 Marks

Attendance- 05 Marks

Practical/Oral examination

- 1. Each student will be given a practical assignment on the basis of the above exercises which will be completed within a given time and assessed by examiners during the oral examination.
- 2. The distribution of marks for oral-practical examination shall be as follows:
- a. Practical Assignment: 15 marks
- b. Oral: 10 marks
- 3. Evaluation of practical/oral examination to be done based on the performance of practical assignment.
- 4. Students work along with evaluation report to be preserved till the next examination

		Tea	achin	g Sche	eme		'				
G G 1	G 7	Course Name (Contact Hours) Credits Assigned									
Course Code	Course	Name			Theory	Theory	Studio	Total			
BDL403	Model Making	Work	shop-	II	2		2		2		
								•	•		
					Exam	ination Sch	eme				
		Theory		y Term			Total				
Course Code	Course Name		ntern sessm		End Sem Exam	Exam Duration (in Hrs)	Work	Pract	Total		
		Test 1	Test 2	Avg.							
BDL403	Model Making						50	50	100		
	Workshop-II										
The Common Aires	Co	urse (Jutco	mes/O	bjectives						
The Course Aims	To identify tools, wo	rk ma	terial :	and me	easuring i	nstruments u	seful for	Model m	aking		
1	To receive to one, we										
Course Outcomes	: The learner will be a	ble to		1	<u> </u>	<u>I</u>		1	l		
1	Gain basic working l			nd Ma	ike model	s of various	forms pap	er mode	ls.		
2	Gain basic working k										
3	Gain basic working l	cnowle	edge a	nd ma	ke models	s from plaste	r of paris				
4		g knowledge and make models from wood									
5	Gain basic working l	g knowledge and make models from metal									
Sr.No.	Module			•	Detaile	d Content			Hours		

I	Paper model	Paper model: Introduction to surface development method, Geometric and organic forms using surface development, origami etc							
II	Terracotta and plasticine clay	Terracotta and plasticine clay: Introduction to clay as a material, tools used for clay modeling, making sculptures and other models using clay, pottery, clay throwing techniques							
III	Plaster of Paris	Plaster of Paris: Working with PoP as a material, carving PoP to desired shape, Sanding and finishing PoP models.							
IV	Wood	Wood: Working with wood, cutting, sanding, joineries, turning and facing operations with wood.	8						
V	Metal	Metal: working with different types of sheet, billet and metal rods. Using tools like angle grinder and die grinder to shape metal. Basic welding techniques (arc welding, tig welding, gas welding), polishing and finishing metal surfaces.	8						

Note: Suggested List of Experiments is indicative. However, flexibility lies with individual course instructors to design and introduce new, innovative and challenging experiments, / Lab work (limited to maximum 30% variation to the suggested list) from within the curriculum, so that the fundamentals and applications can be explored to give greater clarity to the students and they can be motivated to think differently.

Assessment:

Distribution of marks for term work-50

Laboratory work- 45 Marks

Attendance- 05 Marks

Practical/Oral examination

- 1. Each student will be given a practical assignment on the basis of the above exercises which will be completed within a given time and assessed by examiners during the oral examination.
- 2. The distribution of marks for oral-practical examination shall be as follows:
- a. Practical Assignment: 30 marks
- b. Oral: 20 marks
- 3. Evaluation of practical/oral examination to be done based on the performance of practical assignment.
- 4. Students work along with evaluation report to be preserved till the next examination

	Teaching Scho	eme				
G G 1	C N	(Conta	ct Hours)	Credi	its Assig	ned
Course Code	Course Name	Theory	Studio	Theory	Studio	Total
BDL404	Mini Project 1B		4		2	2

					Exam	ination Sch	eme		
Course Code	Course Name	Internal Assessment			End Sem Exam	Exam Duration (in Hrs)	Term Work	Pract	Total
		Test 1	Test 2	Avg.					
BDL404	Mini Project 1B						25	25	50
	Co	urse (Outco	mes/O	bjectives				
The Course Aims									
1	1. To acquaint with the	he pro	cess o	f ident	ifying the	needs and c	onverting	it into t	he
2	problem. 2. To familiarize the	proces	ss of s	olving	the probl	em in a grou	p.		
2	3. To acquaint with t	_					_	to attem	ıpt
3	solutions to the probl	lems.							•
4	4. To inculcate the pr	rocess	of sel	f-learn	ing and re	esearch.			
	Expected Cou								
1	Identify problems ba								
2	Apply Knowledge ar				•		•		
3	Develop interpersona								
4	Draw the proper infe experimental/simulat	ions.							
5	Analyse the impact of development.					nvironmental	l context 1	for susta	inable
6	Excel in written and								
7	Demonstrate capability	ities of	f self-	learnin	g in a gro	oup, which le	ads to life	long lea	arning.
8	Demonstrate project	manag	gemen	t princ	iples duri	ng project w	ork.		
Guidelines for Min	ni Project								

- 1. Students shall form a group of 3 to 4 students, while forming a group shall not be allowed less than three or more than four students, as it is a group activity.
- 2. Students should do survey and identify needs, which shall be converted into problem statement for mini project in consultation with faculty supervisor/head of department/internal committee of faculties.
- 3. Students hall submit implementation plan in the form of Gantt/PERT/CPM chart, which will cover weekly activity of mini project.
- 4.A log book to be prepared by each group, wherein group can record weekly work progress, guide/supervisor can verify and record notes/comments.
- 5. Faculty supervisor may give inputs to students during mini project activity; however, focus shall be on self-learning.
- 6. Students in a group shall understand problem effectively, propose multiple solution and select best possible solution in consultation with guide/ supervisor.
- 7. Students shall convert the best solution into working model using various components of their domain areas and demonstrate.
- 8. The solution to be validated with proper justification and report to be compiled in standard format of University of Mumbai.
- 9. With the focus on the self-learning, innovation, addressing societal problems and entrepreneurship quality development within the students through the Mini Projects, it is preferable that a single project of appropriate level and quality to be carried out in two semesters by all the groups of the students. i.e. Mini Project 1 in semester III and IV. Similarly, Mini Project 2 in semesters V and VI.
- 10. However, based on the individual students or group capability, with the mentor's recommendations, if the proposed Mini Project adhering to the qualitative aspects mentioned above gets completed in odd semester, then that group can be allowed to work on the extension of the Mini Project with suitable improvements/modifications or a completely new project idea in even semester. This policy can be adopted on case by case basis.

Guidelines for Assessment of Mini Project:

Term Work

- 1. The review/ progress monitoring committee shall be constituted by head of departments of each institute. The progress of mini project to be evaluated on continuous basis, minimum two reviews in each semester.
- 2. In continuous assessment focus shall also be on each individual student, assessment based on individual's contribution in group activity, their understanding and response to questions.
- 3. Distribution of Term work marks for both semesters shall be as below;

Marks awarded by guide/supervisor based on log book: 10

Marks awarded by review committee: 10

Quality of Project report: 05

Review/progress monitoring committee may consider following points for assessment based on either one year or half year project as mentioned in general guidelines.

One-year project:

1. In first semester entire theoretical solution shall be ready, including components/system selection and cost analysis. Two reviews will be conducted based on presentation given by students group.

- -- First shall be for finalization of problem
- -- Second shall be on finalization of proposed solution of problem.
- 2. In second semester expected work shall be procurement of component's/systems, building of working prototype, testing and validation of results based on work completed in an earlier semester.
- -- First review is based on readiness of building working prototype to be conducted.
- -- Second review shall be based on poster presentation cum demonstration of working model in last month of the said semester.

Half-year project:

- 1. In this case in one semester students' group shall complete project in all aspects including,
- Identification of need/problem
- Proposed final solution
- Procurement of components/systems
- Building prototype and testing
- 2. Two reviews will be conducted for continuous assessment,
- First shall be for finalization of problem and proposed solution
- Second shall be for implementation and testing of solution.

Assessment criteria of Mini Project

Mini Project shall be assessed based on following criteria;

- 1. Quality of survey/ need identification
- 2. Clarity of Problem definition based on need.
- 3. Innovativeness in solutions
- 4. Feasibility of proposed problem solutions and selection of best solution
- 5. Cost effectiveness
- 6. Societal impact
- 7. Innovativeness
- 8. Cost effectiveness and Societal impact
- 9. Full functioning of working model as per stated requirements
- 10. Effective use of skill sets
- 11. Effective use of standard engineering norms
- 12. Contribution of an individual's as member or leader
- 13. Clarity in written and oral communication

In one year, project, first semester evaluation may be based on first six criteria's and remaining may be used for second semester evaluation of performance of students in mini project.

In case of half year project all criteria's in generic may be considered for evaluation of performance of students in mini project.

Guidelines for Assessment of Mini Project Practical/Oral Examination:

- 1. Report should be prepared as per the guidelines issued by the University of Mumbai.
- 2. Mini Project shall be accessed through a presentation and demonstration of working model by the student project group to a panel of Internal and External Examiners preferably from industry or research organizations having experience of more than five years approved by head of Institution.
- 3. Students shall be motivated to publish a paper based on the work in Conferences/students competitions.