

<u>AR.1.0</u>	ELIGIBILITY
	Eligibility of admissions to First Year Bachelor of Architecture program is based on the guidelines issued by Council of Architecture from time to time.
<u>AR.2.0</u>	REGISTRATION
2.1	A student admitted to Semester I must register for all courses in the semester as in the programme of studies. For all subsequent semesters, a student must register for all courses prescribed in the Semester for which he/she is eligible.
2.2	A student must have paid full fees, to be a bonafide student for the semester and he/she must be registered for all courses for which he/she is eligible. Only a bonafide student shall be entitled to facilities on and off the campus, concessions, introductions, etc.
2.3	A student shall not be permitted to take time off more than 2 semesters consecutively for purposes of work experience, travel or alternative studies, or for any other valid reason. A continuous break in studies beyond 2 semesters shall mean that the student status is forfeited and the student is required to apply for readmission.
2.4	A student may be denied Registration if he/she has been debarred or suspended from studies due to disciplinary action taken by the School/College or the University.
<u>AR 3.0</u>	DISCIPLINE
3.1	High Standard of discipline is expected from all the students enrolled. Basic guidelines of the code of conduct have been included in the agreements signed by the students & Parents/Guardians, at the time of admission/registration.
3.2	Any non-observance of the laid down norms shall res ult indisciplinary/administrative action, including expulsion from the courses. Action will be considered based on gravity and line of action initiated by the School/College or the University.
<u>AR. 4.0</u>	STAGE CLEARANCE
4.1	A student at any time can carry a limited number of credit backlog, except at stage clearance as mentioned in the table 4.6.a. A student having more than the mentioned credits backlog shall not be permitted to register for any subsequent semester till he/she has reduced the total backlog to less credits.
4.2	FIRST STAGE CLEARANCE : A student, at the end of first year must have cleared 48 out of 60 credits of First two semesters. This requirement must be fulfilled at the end of Semester II. A student not clearing 48 credits, must repeat the First Year and clear all subjects in which he/she has failed. Full fees as applicable in the case of new registration shall be charged for the repeat year. A maximum backlog of 12 credits shall be permissible for registration to Semester III. A student is required to register and pay the prescribed fees at the beginning of the Semester-III.
4.3	SECOND STAGE CLEARANCE: A student at the end of the Third year (Semester VI), in order to qualify for Semester VII, must have cleared all Design Studios including Design Studio of Semester -VI and at least 171 out of 180 credits. A maximum backlog of 9 credits shall be permissible for registration to Semester VII. A student is required to register and pay the prescribed fees at the beginning of the Semester-VII.
4.4	THIRD STAGE CLEARANCE: A student at the end of the Fourth year (Semester VIII), in order to qualify for Semester IX, must have cleared all Design Studios including Design Studio of Semester -VIII and at least 231 out of 240 credits. A maximum backlog of 9 credits shall be permissible for registration to Semester VII. A student



	is required to register an	d pay the prescribed fees at the	e beginning of the Se	emester-IX.												
4.5	FOURTH STAGE CLEAR	ANCE: A student at the end	of Semester-IX, in	order to qualify for registra	tion to											
	Semester-X (Design Thes	sis), must have cleared 267 out	of 270 credits up to	this stage. A maximum backl	og of 3											
	credits shall be permissi	ble for registration to Semester	· X.													
4.6	A student admitted at	Higher Levels, through high	er-level admissions	, coming from other Univer	sity or											
	recognized colleges, shall	ll be exempted from courses cl	eared successfully a	at the University or College he	/she is											
	coming from up to the le	evel at which the student is ad	mitted subject to eli	gibility by the University and	course											
	by course grant of exemp	otion as decided by the Equival	ence Committee.													
	The details of Stage Clean	rance are summarized as under	Table 4.6.a.:													
		BACHELOR of A	ARCHITECTURE:													
	SEMESTER (FROM)	PERMISSIBLE CREDIT	SEMESTER (TO)	PERCENTAGE OF TOTAL												
		BACKLOG		CREDITS IN THE SEMESTER												
	I	15 CREDITS	I	50%												
	П	12 CREDITS	Ш	40%												
	FIRST STAGE CLEARANCE III 12 CREDITS IV 40%															
	ш	III 12 CREDITS IV 40% IV 12 CREDITS V 40%														
	IV	IV 12 CREDITS V 40% V 12 CREDITS VI 40%														
	V	IV I2 CREDITS V 40% V 12 CREDITS VI 40% VI 09 CREDITS VII 30%														
	VI	V 12 CREDITS VI 40% VI 09 CREDITS VII 30%														
	VI 09 CREDITS VII 30% SECOND STAGE CLEARANCE															
	VII	09 CREDITS	VIII	30%												
	VIII	09 CREDITS	IX	30%												
	AS	THIRD STAGE CLEARANCE														
	IX	03 CREDITS	X	10%												
		FOURTH STAGE CLEARANCE														
<u>AR 5.0</u>	ATTENDANCE	S Tan	V		·											
51	A student is expected to	attend Studios Workshops a	nd Lectures regular	lv at all scheduled times Mi	nimum											
011	attendance requirement	t is 80% of the total classes	held in a course.	A student not having the re	quired											
	minimum attendance an	nd a minimum 40% internal a	ssessment in any co	ourse, shall be declared non e	eligible											
	(NE) to take the Universi	ity Examination in that particul	ar course. The decis	sion of the University shall be t	treated											
	as final in this matter.															
5.2	In the event of serious i	llness, a student may be perm	itted to have a mini	mum attendance of 60% of th	ie total											
	classes held in a course i	n consultation with the Princip	al/Director of the co	oncerned College.												
5.3	Continuous absence with	hout a valid reason for more t	han 6 weeks shall b	e deemed as discontinuation	of that											
	semester. If a student w	ishes to continue in the School	/College, he/she ma	y seek fresh Registration in th	e same											
	semester in the next acad	demic year.														



<u>AR 6.0</u>	EVALUATION AND EXAMINATION
6.1	All courses are evaluated by regular assessment of the Term-work during the semester and the end - term written Examination / Jury or Viva by the University. The following pattern shall be followed for Studio, Theory and Workshop/ Seminar courses respectively.
	A STUDIO /DESIGN THESIS:
	50~% - Periodic assessment of Term-work (including time problems during the semester)
	50 % - End-term Jury/Viva.
	<u>B_THEORY:</u>
	50 % - Periodic assessment (quizzes, papers, assignments/tests etc.)
	50 % - End-term written examination
	C WORKSHOP/SEMINAR/OTHER INTERNAL SUBJECTS:
	100 % - Periodic assessment of Term-work (assignments /exercises/presentation etc.) and End-term submission/report or viva or both.
6.2	The minimum level for passing and obtaining credits is 50% course wise. Minimum passing percentage in Internals/ Continual Assessment is 50 % and in external University Examination (Theory/ Studio) is 50%. Passing are both the heads (Internal and External) is mandatory to earn full credits of the subject. The rules for Condonation and promotion shall be as per Ordinances laid down by University.
6.3	For award of Class in the Final Year (Semester VIII and X), the following standards shall be applicable to the
	1. Distinction 66% and above
	2 First Class 60% and above
	3 Second Class 50% and above
	4. Pass Class 45% and above
6.4	Exemption for head of passing in any subject is 50% and above (applicable for repeat year/semester)
6.5	A student may apply for rechecking / reassessment as per rules of the University if the results of any course is felt to be unfair or erroneous.
<u>AR 7.0</u>	REPEAT EXAMINATION
7.1	It is student's responsibility to seek information / advice regarding a repeat examination.
7.2	A student who has failed in any subject shall appear for the examination as and when it is conducted by the University. The marks of Term work shall be carried over from the semester in which term work was completed successfully.
<u>AR 8.0</u>	REPEAT REGISTRATION
8.1	A student who fails to clear Term work and or internal assessment of a course as per Clause 5.0 and 6.0 shall have to register for the course and repeat it fully in a subsequent semester. In such cases, none of the marks/ credits earned earlier shall be carried over.



8.2	A student must make a written application for re- registration to a particular course/s. If there are more than ten students repeating a particular course, the School/College may at its discretion make arrangement for the students to attend classes.
8.3	A student seeking admission at Higher Levels/ seeking transfer from another University or recognized colleges, shall be exempted from courses cleared successfully at the University or College he/she is coming from up to the level at which the student is admitted subject to eligibility by the University and course by course grant of exemption as decided by the Equivalence Committee. This admission shall be done strictly as per the procedure laid down by the University and according to the guidelines of Council of Architecture.
<u>AR 9.0</u>	RELATED STUDY PROGRAMS (RSP)
	Students for Ist, through IIIrd year have to go for RSPs as part of their academic curriculum. Each RSP carries 03 credits and it is important to earn these credits in order to attain a class in final year and for a Award of Degree.
<u>AR 10.0</u>	OFFICE TRAINING / INTERNSHIP (Semester IX)
10.1	A student undertaking Office Training must satisfy conditions of training and submit the necessary reports for evaluation as specified in the curriculum.
10.2	On examination of the report and a presentation by the student, the Examiners would award the credits for Training.
<u>AR 11.0</u>	DISSERTATION / DESIGN THESIS
11.1	A student must register for Dissertation semester with 3 copies of the proposal on A4 Size papers with topic, name, ID No., the name of the Guide and his / her acceptance letter.
11.2	After the proposal has been submitted, a student shall not be permitted to change the topic of Dissertation substantially without prior permission of the Dissertation Committee.
<u>AR 12.0</u>	AWARD OF DEGREE
	A student will be awarded the degree of Bachelor of Architecture (B.Arch.) after successful completion of the Five Year Programme of study.
	29000



						SEMES	TER - I							
				EXAMINA	TION		DISTRIBUT	ION OF MARKS	8	MAR	KS	NO). OF HRS. / WI	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OF	PAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. marks)	STUDIO /P /WORKSHOP = avg. pass	PRACTICAL = 100 marks (45% ing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3101	ARCHITECTURAL DESIGN AND VISUAL ARTS - I	-	1	Jury/Practical			50	50	9	900	0	9	0
2	AR-3102	BUILDING CONSTRUCTION AND MATERIALS - I	1	-	3	50	50	11 -	-	3	300	1	2	0
3	AR-3103	APPLIED MECHANICS	1	1	2	50	50	E Sto		3	300	2	0	1
4	AR-3104	HISTORY OF ARCHITECTURE - I	1		2	50	50	100	1.1	3	300	2	0	1
5	AR-3105	ARCHITECTURAL GRAPHICS AND DRAWING - I	1	-	3	50	50			3	300	1	2	0
6	AR-3106	COMMUNICATION SKILLS	F		Jury/Practical	-	-	100	19	2	200	2	0	0
7	AR-3107	RELATED STUDY PROGRAM - I	/- 4		Jury/Practical	-	-	100		3	300	0	0	3
8	PE-1	PROFESSIONAL ELECTIVE - I	-	1	Jury/Practical	-	-	100		2	200	0	0	2
9	OE-1	OPEN ELECTIVE - I	1		Jury/Practical	-	-	100		2	200	0	0	2
									1	30	3000	8	13	9
			R	8						ТО	TAL 30 HRS/WE	EK @1 CRED	DIT = 1HR.	
								-						

						SEMES	FER - II							
				EXAMINA	TION		DISTRIBUTI	ION OF MARKS	5	MARI	KS	NO). OF HRS. / WI	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OF	PAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. marks)	STUDIO /F /WORKSHOP = avg. pass	PRACTICAL = 100 marks (45% ing marks)	C <mark>redi</mark> t	TOTAL	Theory (1·1)	Studio (1-1)	Workshop/ Practical/ Site
			Theory	Studio/Wor <mark>ks</mark> h op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	(C)	(M x C)	1 intoly (111)	Studio (III)	Visit/ Seminar (1:1)
1	AR-3201	ARCHITECTURAL DESIGN AND VISUAL ARTS - II	-	1	Jury/Practical			50	50	9	900	0	9	0
2	AR-3202	BUILDING CONSTRUCTION AND MATERIALS - II	1	1	3	50	50	12.0		3	300	1	2	0
3	AR-3203	STRUCTURES -I	1	1	3	50	50		1	3	300	2	0	1
4	AR-3204	HISTORY OF ARCHITECTURE - II	1	× 87 a	2	50	50		N N	3	300	2	0	1
5	AR-3205	ARCHITECTURAL GRAPHICS AND DRAWING - II	1		3	50	50	C . # 1		3	300	1	2	0
6	AR-3206	COMPUTER STUDIO - I	-	-	Jury/Practical			100	-	2	200	0	0	2
7	AR-3207	RELATED STUDY PROGRAM - II	-		Jury/Practical			100		3	300	0	0	3
8	PE - 2	PROFESSIONAL ELECTIVE - II	-	-	Jury/Practical	-	-	100	-	2	200	0	0	2
9	OE - 2	OPEN ELECTIVE - II	-	-	Jury/Practical		-	100	-	2	200	0	0	2
									•	30	3000	6	13	11
										TO	TAL 30 HRS/WE	EK @1 CRED	DIT = 1HR.	



						SEMEST	TER - III							
				EXAMINA	TION		DISTRIBUT	ION OF MARKS	S	MAR	KS	NO). OF HRS. / WI	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OI	F PAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. marks)	STUDIO /F /WORKSHOP avg. pass	PRACTICAL = 100 marks (45% sing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3301	ARCHITECTURAL DESIGN STUDIO-III	-	1	Jury/Practical			50	50	9	900	0	9	0
2	AR-3302	BUILDING CONSTRUCTION AND TECHNOLOGY - III	1	-	3	50	50	10		3	300	1	2	0
3	AR-3303	CLIMATOLOGY	1		3	50	50	1 160		3	300	2	0	1
4	AR-3304	HISTORY OF ARCHITECTURE - III	1	- ·	2	50	50	• • •		3	300	2	0	1
5	AR-3305	BASIC DESIGN AND WORKSHOP - I		1	Jury/Practical		-	50	50	3	300	0	1	2
6	AR-3306	DIGITAL ART AND GRAPHICS - I	18		Jury/Practical	-	-	100	19.	2	200	0	0	2
7	AR-3307	RELATED STUDY PROGRAM -III	/ - 4		Jury/Practical	-	-	100		3	300	0	0	3
8	PE- 3	PROFESSIONAL ELECTIVE - III	-	1.1	Jury/Practical	-	-	100	1	2	200	0	0	2
9	OE-3	OPEN ELECTIVE - III	1		Jury/Practical	-	-	100	1	2	200	0	0	2
									2	30	3000	5	12	13
			R	8						ТО	TAL 30 HRS/WE	EK @1 CREI	DIT = 1HR.	
					5				0	and a state of				

						SEMEST	ER - IV							
				EXAMINA	TION		DISTRIBUTI	ON OF MARKS	3	MARI	KS	NC	OF HRS. / W	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OF	PAPERS	DURATION IN HOURS	THEORY = 100 n passing	narks (45% avg. marks)	STUDIO /P /WORKSHOP = avg. pass	PRACTICAL = 100 marks (45% ing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3401	ARCHITECTURAL DESIGN STUDIO-IV		1	Jury/Practical			50	50	9	900	0	9	0
2	AR-3402	BUILDING CONSTRUCTION AND TECHNOLOGY - IV	1	~	3	50	50		3	3	300	1	2	0
3	AR-3403	STRUCTURES - II	1	× 677	3	50	50		K	3	300	2	0	1
4	AR-3404	HISTORY OF ARCHITECTURE - IV	1		2	50	50	C - 71		3	300	2	0	1
5	AR-3405	BASIC DESIGN AND WORKSHOP - II	-	1	Jury/Practical			50	50	3	300	0	1	2
6	AR-3406	COMPUTER STUDIO - II	-	-	Jury/Practical			100	· ·	2	200	0	0	2
7	AR-3407	RELATED STUDY PROGRAM - IV	-	-	Jury/Practical	-	-	100	-	3	300	0	0	3
8	PE-4	PROFESSIONAL ELECTIVE - IV	-	-	Jury/Practical	-	-	100	-	2	200	0	0	2
9	OE-4	OPEN ELECTIVE - IV	-	-	Jury/Practical	-	-	100	-	2	200	0	0	2
										30	3000	5	12	13
										TO	TAL 30 HRS/WE	EK @1 CRED	DIT = 1HR.	



						SEMES	TER - V							
				EXAMINA	TION		DISTRIBUT	ION OF MARKS	S	MAR	KS	NO	D. OF HRS. / W	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OF	F PAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. ; marks)	STUDIO /I /WORKSHOP avg. pass	PRACTICAL = 100 marks (45% sing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op	n Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3501	ARCHITECTURAL DESIGN STUDIO-V	-	1	Jury/Practical		h · /	50	50	9	900	0	9	0
2	AR-3502	BUILDING CONSTRUCTION AND TECHNOLOGY - V	1		3	50	50	8 81		3	300	1	2	0
3	AR-3503	BUILDING SERVICES	1	-	2	50	50			3	300	2	0	1
4	AR-3504	THEORY OF ARCHITECTURE	1	-	2	50	50	1	1.20	3	300	2	0	1
5	AR-3505	SPECIFICATION, COSTING, ESTIMATION AND BUDGETING		-	2	50	50	-	5	3	300	2	0	1
6	AR-3506	DIGITAL ART AND GRAPHICS - II	-	2	Jury/Practical	-	-	100		2	200	0	0	2
7	AR-3507	RELATED STUDY PROGRAM - V	1	1	Jury/Practical	-	-	100		3	300	0	0	3
8	PE-5	PROFESSIONAL ELECTIVE - V		3 - /	Jury/Practical	-	-	100		2	200	0	0	2
9	OE-5	OPEN ELECTIVE - V	R		Jury/Practical	-	-	100		2	200	0	0	2
					-		12			30	3000	7	11	12
			1200					-		ТО	TAL 30 HRS/WE	EEK @1 CREI	DIT = 1HR.	
								1-1						

				EXAMINA	TION		DISTRIBUTI	ON OF MARKS		MARI	KS	NO	O. OF HRS. / WI	EEK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OI	FPAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. marks)	STUDIO /P /WORKSHOP = avg. passi	RACTICAL = 100 marks (45% ing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3601	ARCHITECTURAL DESIGN STUDIO-VI		1	Jury/Practical	UTA	NAU/	50	50	12	1200	0	12	0
2	AR-3602	BUILDING CONSTRUCTION AND TECHNOLOGY - VI	1	1	3	50	50	. 6	10	3	300	1	2	0
3	AR-3603	STRUCTURES - III	1		2	50	50	C - 71	100	3	300	2	0	1
4	AR-3604	LANDSCAPE AND SITE PLANNING	1	-	2	50	50			3	300	2	0	1
5	AR-3605	ADVANCED COMPUTER SKILLS	-		Jury/Practical	184		100	-	2	200	0	0	2
6	AR-3606	RELATED STUDY PROGRAM - VI	-	-	Jury/Practical	-	-	100	-	3	300	0	0	3
7	PE-6	PROFESSIONAL ELECTIVE - VI	-	-	Jury/Practical	-	-	100	-	2	200	0	0	2
8	OE-6	OPEN ELECTIVE - VI	-	-	Jury/Practical	-	-	100	-	2	200	0	0	2
										30	3000	5	14	11
										то	TAL 30 HRS/WE	EK @1 CRED	$\mathbf{T} = 1\mathbf{H}\mathbf{R}.$	



						SEMEST	ER - VII							
				EXAMINA	TION		DISTRIBUT	ION OF MARKS	5	MAR	KS	NC	O. OF HRS. / WI	EEK
			NO. OF	PAPERS	DURATION IN	THEORY = 100	marks (45% avg. marks)	STUDIO /I	PRACTICAL	Credit	TOTAL	Theory (1:1)	Studio (1:1)	WorkShop/
SR.	SUBJECT	SUBJECT NAMES			HOURS	passing	,	avg. pass	ing marks)	(0)	(M X C)			Visit/Seminar
110.	CODES	1111111110	Theory	Studio/Worksh	Theory/	Int. Assessment	Ext. Uni. Exam	Int. Assessment	Ext. Uni. Exam (50%	1				(1:1)
				ор	minar	(40% passing marks)	(50% passing marks)	(40% passing marks)	passing marks)					
1	AR-3701	ARCHITECTURAL DESIGN STUDIO-VII	-	1	Jury/Practical	T • L	1 · /	50	50	12	1200	0	12	0
2	AR-3702	ADVANCED STRUCTURES	1	1º	3	50	50	1 1 1	-	3	300	2	0	1
3	AR-3703	BUILDING REGULATIONS AND INFRASTRUCTURE SERVICES	- 1	-	2	50	50	14	/ j \	3	300	2	0	1
4	AR-3704	HUMAN SETTELMENTS AND PLANNING	1	< C 1	2	50	50		1.0	3	300	2	0	1
5	AR-3705	DESIGN SEMINAR - I	/ •	1	Jury/Practical	-	-	100	TA A	3	300	0	0	3
6	AR-3706	BUILDING INFORMATION MODELLING		2	Jury/Practical	-	-	100		3	300	0	0	3
7	AR-3707	CONSTRUCTION PROJECT MANAGEMENT	1	2	Jury/Practical	-	-	100		3	300	2	0	1
										30	3000	8	12	10
			A	2/						то	TAL 30 HRS/WE	EK @1 CRED	DIT = 1HR.	
							77			Contract of Contract				
			Sales of the local division of the local div	•										
								1 .						

						SEMEST	ER - VIII							
				EXAMINA	TION		DISTRIBUTI	ON OF MARKS	6	MAR	KS	NO	. OF HRS. / WI	EK
SR. NO.	SUBJECT CODES	SUBJECT NAMES	NO. OF	PAPERS	DURATION IN HOURS	THEORY = 100 passing	narks (45% avg. marks)	STUDIO /F /WORKSHOP avg. pass	PRACTI <mark>C</mark> AL = 100 marks (45% ing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	WorkShop/ Practical/ Site Visit/ Seminar
			Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3801	ARCHITECTURAL DESIGN STUDIO-VIII		1	Jury/Practical	DYA	1.5	50	50	15	1500	0	15	0
2	AR-3802	ENVIRONMENTAL SCIENCE AND GREEN CONCEPTS	1	2	2	50	50		5	3	300	2	0	1
3	AR-3803	ACOUSTICS	1	1	2	50	50	10 M		3	300	2	0	1
4	AR-3804	RESEARCH METHODOLOGY - I	-		Jury/Practical	1.1.1		100		3	300	0	0	3
5	AR-3805	DESIGN SEMINAR - II	-	-	Jury/Practical		ľ.	100	- ·	3	300	0	0	3
6	AR-3806	ARCHITECTURAL CONSERVATION	-	-	Jury/Practical			100	-	3	300	0	0	3
										30	3000	4	15	11
				то	TAL 30 HRS/WE	EK @1 CRED	IT = 1HR.							



	SEMESTER - IX													
	SUBJECT CODES	T SUBJECT 5 NAMES	EXAMINATIO		TION	TION DISTRIBUTION		ION OF MARKS	S	MARKS		NO. OF HRS. / WEEK		
SR. NO.			NO. OF PAPERS DURATION IN HOURS		THEORY = 100 passing	marks (45% avg. marks)	STUDIO/PRACTICAL Credit TOTAL Theor /WORKSHOP = 100 marks (45% (C) (M x C) avg. passing marks) Image: state of the s		Theory (1:1)	Studio (1:1)	WorkShop/ Practical/ Site Visit/ Seminar			
			Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)					(1:1)
1	AR-3901	INTERNSHIP [PRACTICAL TRAINING]	-	-	Jury/Practical	4 F.	1 · /	-	100	30	3000	0	0	0
				-	-	1 E	1.1	1. 1.		30	3000	0	0	0
							тот	AL 30-40 HRS/W	EEK @1 CRE	DIT = 1HR.				

	SEMESTER - X													
	SUBJECT SUBJECT CODES NAMES	T SUBJECT S NAMES	EXAMINATION			DISTRIBUTION OF MARKS		MARKS		NO. OF HRS. / WEEK				
SR. NO.			NO. OF	PAPERS	DURATION IN HOURS	THEORY = 100 passing	marks (45% avg. ; marks)	STUDIO /P /WORKSHOP = avg. pass	PRACTICAL = 100 marks (45% sing marks)	Credit (C)	TOTAL (M x C)	Theory (1:1)	Studio (1:1)	WorkShop/ Practical/ Site Visit/ Seminar
		Theory	Studio/Worksh op	Theory/ Studio/Workshop/Se minar	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Uni. Exam (50% passing marks)	< l			(1:1)		
1	AR-31001	DESIGN THESIS	-	1	Jury/Practical	-	-	50	50	18	1800	0	18	0
2	AR-31002	AGRO-ARCHITECTURE	· · .	\	Jury/Practical	A *	-	100	1.	4	400	0	0	4
3	AR-31003	PROFESSIONAL PRACTICE AND ENTREPRENEURSHIP SKILLS			Jury/Practical	VAL	.АБН	100		4	400	0	0	4
4	AR-31004	RESEARCH METHODOLOGY - II		· .	Jury/Practical			100		4	400	0	0	4
					Y	ULA	IN H U A			30	3000	0	18	12
				10				- C	10	ТО	TAL 30 HRS/WE	EK @1 CRED	DIT = 1HR.	
									1001					

PROFESSIONAL COURSE SUBJECT	BUILDING SCIENCE AND APPLIED ENGINEERING
ELECTIVE COURSES	PROFESSIONAL ABILITY ENHANCEMENT COURSES



		B.Arch. FIRST YEAR: SEMESTER I						
AR 3101 ARC	AR 3101 ARCHITECTURAL DESIGN AND VISUAL ART - I							
L=00 S=09 W=00	CREDITS = 09 CONTACT HRS/WK = 09	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50					
Focus	To introduce the fundamentals of design and development of design vocabulary. To enable understanding of the relationship between the grammar of design and architecture. To nurture design thinking and its application in developing two-dimensional compositions using various media for representation. Understanding of scale and proportions through measurement of spaces using only human body elements.							
Contents	Part A: VISUAL ART							
	Fundamentals of Visual Perception [Gestalt Theory] Understanding elements of visual perception - line, form, space, color, texture, pattern etc. Relationship of forms and form space. Analysis of visual impressions and representing in various media.							
	Part B: ARCHITECTURAL D	ESIGN						
	Anthropometrics: Human Dir	nensions and Proportions.	E.					
	Anthropometric study and er	gonomics of human figures.	20					
	Dimensions of furniture: Rel human figures, vehicles, trees	ationship with human anthropometrics v s, etc. to have a better understanding of p	vith the help of free hand drawings of coportion.					
	Basic She <mark>lt</mark> er: Understanding	of shelter as a resultant of various forces	: culture, climat <mark>e</mark> , site & technology					
	The Contents elaborated in two parts should be dealt with by Design Exercises involving real and imaginary objects, drawing compositions and models, to form an appropriate base for subsequent Architectural design.							
Projects	Part A: VISUAL ART	VIDYANAGAR						
	Working with various materials relating to visual and tactile qualities. Drawings and sketches making basic geometrical forms and simple shapes in various materials like paper, clay, wax, soap, wires etc.							
	Part B: ARCHITECTURAL D To expose students to variou	ESIGN s types/categories of spaces.						
	Single-function small space d with model making, must be and functions.	esign with emphasis on above topics / iss done, relating to human scale and spatial	ues. Various design exercises along requirements for different activities					
Skills	Sketching and model making of designed spaces can be att	for 2D and 3D visualization to be stressed empted for the final project using models	d. Single line orthographic drawings to facilitate visualization.					
References	 Chauhan P- Learning Ba Ching K. Francis- Form, S Chicera De Joseph- Time Guptill Arthur- Free hand Neufert Ernst- Neufert's Waug Thomas- Pencil Sk Tutt Patricia- New Metricia 	sic Design Space & Order Saver's Standards d Drawing Self Taught Data etching c Handbook						



AR 3102 BUILDING CONSTRUCTION AND MATERIALS – I						
L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50					
Focus	Understanding basic building	gelements, building material and construc	ction process.			
Contents	Building Material:					
	Stone, lime, timber, bricks, ce properties, methods of applic available.	ement, aggregate, mortar, steel, concrete R cation, criteria for selection of materials b	C.Ctheir physical and behavioral ased on design and market forms			
	Basic Building Components	5:				
	Typical Wall Section [Foundation to Roof]: Definition and Brief understanding of each component. Construction methods of walls with different material - mud, brick masonry, stone masonry - their basic bonds. Wooden joinery.					
Method	Lectures on basic construction methods and building materials. Class exercises, workshops, site visits, case-studies, visit to manufacturing sites e.g. brick kiln, saw mills and documentation. Study of various components of existing buildings through sketches & models.					
References	 Barry R Construction of Building Khanna P.N Civil Engineers Hand Book Kumar Sushil-Building Construction Mackay W. B Building Construction Mitchell and JBuilding Construction Rangwala- Building Construction Rangwala- Building Materials Scheffler Micheal J.; Hoigard Kurt R-Dimension Stone Use in Building Construction 					
AR 3103 APF	PLIED MECHANICS					
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50			
Focus	Achieving a conceptual under behaviour of materials.	rstanding of the applied mechanics, system	n of forces and elementary structural			
Contents	Introduction to mechanics th and its applications, unit con	rough concepts of mass, gravity, forces, so versions, Internal and External Forces (na	calar and vector behaviour, SI units tural and manmade)			
	Structural element terminology related to components and their behaviour in different types of building - Concept of load bearing and frame structure, importance of foundation in buildings.					
	Force and force systems defin Examples and limitation; Lan forces – Examples (analytical	nitions and sketches - Law of parallelogra ni's theorem – Free body and space diagra method); Concept of equilibrium, Momer	m - Examples; law of triangle - ım with Examples; Law of Polygon of nt and Couple.			
	Concept of strength of elastic relevance to building structu with definition).	and plastic material; Concept of mechani re behaviour (tensile, compressive, flexur	cal properties of material in e, toughness, and malleability, fatigue			



Method	Lecture based theory and discussions with illustrations and calculation of examples, Preparation of structural drawing along with schedules.						
References	 Bureau of Indian Standard-IS 875 – 1987 Code Of Practice For Design Loads (New Delhi) Dorie Salva- Fundamentals Of Structures Hagerty & Plass- Engineering Mechanics Junnarkar S.B. & Shah H.J Applied Mechanics Khurmi R.S Engineering Mechanics Parikh J.PUnderstanding Concept Of Structural Analysis Design Beer & Johnston -Mechanics of Materials E. Popov -Mechanics of Materials B. M. Rawal -Experimental Mechanics of Solids 						
AR 3104 HIS	TORY OF ARCHITECTURE – I						
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50						
Focus	The study must enable students to do a comparative evaluation of various civilizations, chronological developments along the timeline and across geographies through mapping of architectural developments over the world from ancient times.						
Contents	Study of the ancient world through its history, art, religion, philosophy, etc. for shaping human surroundings. Architecture of ancient civilizations: Prehistoric settlements and megalithic structures, Mesopotamian, Indus Valley civilization, Egyptian, Pre-Columbian, Chinese, Greek & Roman civilization.						
Methods	Lecture-based teaching, along with documentaries/films, readings etc., with a number of assignments/exercises to encourage self-learning as individuals or in groups. Case-studies, analytical exercises on built-form of various periods to understand the architectural images of various times and places.						
References	 Arnold Toynbee- History of world DIVANIA GAR Bronowski J Ascent of Man Gwilt Joseph- Encyclopedia of Architecture Kostof and Ingersoll RWorld Architecture across cultural History Sir Fletcher Bannister- A History of Architecture 						
AR 3105 AR(CHITECTURAL GRAPHICS AND DRAWING – I						
L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50						
Focus	To develop graphical and drawing skills as tools for visualization and representation of design.						
Contents	 Familiarization with drawing materials and equipment. Architectural lettering and understanding of scales. Line intensity and precision in drawings. Principles of Plane and Solid Geometry with surface development through paper model making. Orthographic Projections of points, lines, planes and solids. Sections of Solids-simple and complex objects. Making basic drawings and rendering techniques. 						



Method	A series of exercises to be completed in the studio/classroom.						
References	 Bhatt N.D. & Panchal V.M Engineering Drawing Ching D.KVisual Dictionary of Architecture Ching D.KArchitectural Graphics Gill Robert- Rendering with Pen & Ink Leinbach B. Richard-Visualization Techniques 						
AR 3106 COM	AR 3106 COMMUNICATION SKILLS						
L=02 S=00 W=00	CREDITS = 02 CONTACT HRS/WK = 02INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00						
Focus	Enhancing communication skills of architectural students through listening, speaking, reading and writing.						
Contents	Basics of Communication: Definition and process of communication – kinesics, paralinguistic, proxemics, chronemics. Listening skills through talks for specific information;						
	colleagues;						
	Presentation Strategies: Defining the purpose, How to make an effective presentation? Analyzing audience and locale; Organizing content						
	Reading fluency- reading strategies, techniques of reading, developing reading comprehension.						
	Writing skills especially writing emails, resumes; statement of purpose, proposals and reports						
Method	A series of small practical exercises and demonstration to develop confidence and skills - Posture, body language, voice modulation, timing, target audience, comprehension and writing skills						
AR 3107 REI	ATED STUDY PROGRAM – I						
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00						
Focus	Visualization and Communication - Study of new and old buildings in their regional contexts for critical response to its specific natural environment, people and culture.						
Contents	Any site or building may be selected in order to communicate its sense of place using representation skills as a primary focus through proportionate sketching and measured drawings with respect to human scale.						
Method	Recording and building a narrative on the primeval study through varied methods of representations.						
PE-1 PROFES	SIONAL ELECTIVE – I						
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00						
Focus	To acquaint students with other relevant fields, that compliments the learning of the built environment and contributes to bringing positivity in the society.						
	The wide array of electives comprehensive learning skill and aptitude towards design.						



Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Art and in Architecture 2. Graphic Design 3. Model Making 4. Furniture Design 				
Method	Portfolio and Project Submission				
OE-1 OPEN EI	OE-1 OPEN ELECTIVE – I				
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00		
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc.				
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Painting 2. Photography 3. Pottery and Ceramics 4. Calligraphy 				
Method	Portfolio and Project Submiss	sion	5		

	B.Arch. FIRST YEAR : SEMESTER II						
AR 3201 AR	AR 3201 ARCHITECTURAL DESIGN AND VISUAL ARTS – II						
L=00 S=09 W=00	CREDITS = 09 CONTACT HRS/WK = 09INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIV = 50	ERSITY EXAMINATION (JURY)					
Focus	To introduce the basics of design principles with respect to natural and man-made objects. To enable the understanding of the relationship between space planning and functional aspects of design. Application of colour theory, scale, proportions and form through design process.						
Contents	 Part A: Design principles - Natural and manmade objects. Observing and analyzing design of natural objects and man-made objects including its geometry, pattern, texture, color composition, solid-void relationships etc. Structure and composition of shapes and forms. Colour : Theory and systems, role and effects of colour and texture in spaces. Colour as a form giver to spaces and its perception. Effects of color and texture in modification of compositions. Analysis of space using monochromatic or achromatic abstractions in 2D. Behaviour and effects of coloured compositions (enlargement, shrinkage of spaces, emphasis, warmth and coolness etc.). Part B: Human Scale, Space/Form and the design process. Form: Various forms, its elements and their characteristics 						



	Space: Elements of space making (enclosure and openings) and exploring the principles of combination. Types of Spaces: Activity space, circulation spaces, waiting spaces etc.					
	Movement & Linkages: Kinds and spatial values. Quality of Space: Effects of light, color, material, texture and views. Design Process: Requirements/needs of project, site-analysis, activity and other areas and Interrelationships, programming & ordering mechanisms, abstract concepts.					
	The Contents elaborated in two parts should be dealt by Design Exercises involving real and imaginary objects, drawing compositions and models, to form an appropriate base for subsequent Architectural design					
Projects	Part A: Design principles - Natural and manmade objects. Working with various materials relating visual and tactile qualities. Representation of design principles through drawings, sketches, 2D and 3D compositions. Model making in various materials as an aid to design, composition and analysis (use wood, mud, paper, acrylic, cork, etc.). Composition through paintings collages etc. Part B: Human Scale, Space/Form and the design process. Design of small scale human habitat that introduces the idea of a successful proposition, manifests the complex and imaginative inter-relationships between all the above.					
Skills	To develop a series of abstract models that demonstrate some of the essential spatial/ programmatic characteristics of the project and application of skills learnt in AGD courses such as sciography/ perspective, basic rendering techniques in architectural drawings.					
References	 Ching D.KForm, Space & Order Francis Guptill Arthur- Free hand Drawing Self Taught Orr Frank-Scale in Architecture Waug Thomas- Pencil Sketching Zevi Bruno-Architecture as Space 					
AR 3202 BUII	LDING CONSTRUCTION AND MATERIALS - II					
L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50					
Focus	Understanding building elements, introduction to materials and its use in construction of buildings.					
Contents	Building Material: Metal – Ferrous and non-ferrous – Iron, Steel, aluminum, copper Their physical and behavioural properties, methods of application, criteria for selection of materials based on design, application in building industry and market forms available.					
	Building Components:					
	Foundation and its types in detail (shallow to deep)					
	Load bearing and Frame structure along with their behaviour of the structural system. To Terrace / Roof. (Definition and Brief understanding of each component – Footing (isolated column and load bearing wall), DPC, Ground beam, Plinth beam, Tie beam).					
	Brick masonry – acute, obtuse, cavity wall					
	Arches and Lintels in different materials.					
Method	Lectures on basic construction methods and building material. Class exercises, workshops, site visits, visit to factories and processing sites, case studies and documentation. Study of various components of existing buildings through sketches & models.					



References	 Barry R Construction of Building Chudley-Construction Technology Khanna P.NCivil Engineers HandBook Mackey W.BBuilding Construction Mitchell and J Building Construction Punamia B.C.;Jain Ashok K. Jain Arun KBuilding Construction Rangwala-Building Construction Rangwala-Building Materials Sushil Kumar-Building Construction 					
AR 3203 STR	UCTURES- I					
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50			
Focus	Achieving the ability of analysing and understanding the behaviour of structural elements under external loading.					
Contents Method	Center of Gravity and Momer Gravity (One and Two Dimen theorem). Concept of stress-strain; Typ- permissible stress, ultimate s of stress-strain curve, examp Types of loads, supports and shear force and bending mon beams and overhang beams; Lecture based theory and dis schedules.	it of Inertia Concepts, theory and applicat isional only); Examples of Moment of Iner es of stress under external forces, its impo- tress and elongation, stresses in wires, st les based on the topic. their reactions (only for point and Unifor nent using equation and diagrams for sim definition of point of contraflexure. cussions, calculation of examples, prepara	ions – with examples of Center of tia (parallel and perpendicular axis ortance, elastic limit, yield point, resses in composite sections, concept mly distributed load); calculation of ply supported beams, cantilever			
References	 Jurnarkar S. B. & Shah H. J Mechanics of Structures (I & II) Khurmi R.SStrength of Materials Beer & Johnston - Mechanics of Materials Popov .E-Mechanics of Materials Rawal B.M-Experimental Mechanics of Solids by B. M. Parikh J. PUnderstanding Concept of Structural Analysis Design Parikh J. P -Fundamentals of Structural Analysis & Design Norris & Wilbur - Elementary Structural Analysis 					
AR 3204 HIS	R 3204 HISTORY OF ARCHITECTURE – II					
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50			
Focus	To 7amiliarize students with sub-continent.	architectural developments about ancien	t times to 19 th Century A.D. in Indian			
Contents	To impart an understanding of the evolution in architecture from the medieval to colonial times. Indian architecture from Vedic period, through Buddhist era to Gupta period. Developments					

across the subcontinent in the late Classical period.



	Indian Architecture after the introduction of Islamic influences, various regional styles during Islamic period.					
	Late Hindu Temples Till 1400 A.D focusing on Indo Aryan and Dravidian Architecture.					
	Indian Context- Mughal Architecture, Post Islamic Hindu and Secular Architecture, Palaces, Civic Buildings, Forts and Step wells in India.					
	Colonial architecture in India- Imported styles and trends.					
Methods	Lecture based Teaching along with documentaries/films, readings etc., with a number of assignments/exercise to encourage self-learning as individuals or in group.					
References	 Arnason H.HHistory of Modern Art : Painting, Sculpture, Architecture Gwilt Joseph-Encyclopedia of Architecture Percy Brown-Indian Architecture(Buddhist & Hindu) – I Percy Brown-Indian Architecture (Islamic) – II Sir Fletcher Bannister- A History of Architecture Tadgill Christopher-Indian Architecture 					

AR 3205 ARCHITECTURAL GRAPHICS AND DRAWING - II

L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	To develop skills for technical representation of architectural designs Projects.			
Contents	Three dimensional representation of simple & complex forms and architectural objects Isometric, axonometric and perspective (One-point, two-point). Three dimensional representations of interior of spaces: Sectional perspectives, axonometric. Sciography of simple forms shadows on horizontal, vertical, and on objects' own surfaces. Advanced Rendering techniques.			
Method	A series of exercises to be completed in the studio/classroom.			
References	 Bhatt N.DSolid Geometry Gill Robert-Rendering with Pen & Ink Malik- Sciography & Perspective Scharwachter Georg-Perspective for the architecture 			

AR 3206 COMPUTER STUDIO - I

L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To help students to understand the basic computer skills & application of computers to prepare 2D drawings in the field of architecture.		
Contents	Basic Techniques for preparing 2D Architectural Drawings using softwares like – AutoCad, ArchiCad, Revit etc.		
Method	Use of computer software by giving preliminary exercises on plan, elevation, section etc. of buildings.		



AR 3207 RELATED STUDY PROGRAM – II			
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	Past contemplations: study o	f facets of architecture through the lens of	f evolution and Indian history.
Contents	Visit/s to site/s (preferably historical); sketching various natural and manmade objects and settings, visual representation through tools like pencils, chalk, charcoal, ink, oil paints, water colours, etc. Any site or building may be selected in order to highlight antiquity, art design, construction techniques and spirit of the place.		
Method	Specific inputs on the method ascribed ways, accuracy in m formats and scales.	ds of observation, recording, documenting easuring; collating the recorded informat	and representing. Documentation in ion and drawing them up in specified
PE – 2 PROFE	SSIONAL ELECTIVE – II		
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To acquaint students with other relevant fields, that compliments the learning of the built environment and contributes to bringing positivity in the society. The wide array of electives comprehensive learning skill and aptitude towards design.		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Art and in Architecture 2. Graphic Design 3. Model Making 4. Furniture Design 		
Method	Portfolio and project submission.		
OE – 2 OPEN	ELECTIVE – II		
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : Painting Photography Pottery and Ceramics Calligraphy 		
Method	Portfolio and project submiss	sion	



B.Arch. SECOND YEAR : SEMESTER III				
AR 3301 ARCHITECTURAL DESIGN STUDIO-III				
L=00 S=09 W=00	CREDITS = 09 CONTACT HRS/WK = 09	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50	
Focus	Material and Structure as det	erminants of Architectural Form.		
Contents	 The objectives of the studio are three fold: a) Understanding materials its properties and character. b) Understanding basic structural systems in various materials (timber, mud, brick, fabric, R.C.C, steel, glass etc.) c) Exploring structure as a form giver for various materials. Special emphasis shall be on understanding the implications of using different types of building materials i.e. brick, stone, earth, timber, bamboo, steel, aluminum, concrete, glass etc. to leverage the special qualities of materials to meet the needs in terms of strength, durability, texture, visual appeal, climatic suitability & overall functionality. Students are expected to explore through their design exercise-volume of space, shape, form, function, climatic consideration with material and structural sensitivity. 			
Projects	The design problem (a small scale multi-functional building) should address the appropriateness of use, built form and choice of building materials. The design studio shall be closely integrated with building construction and structure.			
Skills	Preparation of architectural design drawings and models with appropriate material detailing. Site visits and case studies.			
AR 3302 BUII	LDING CONSTRUCTION AND	TECHNOLOGY – III		
L=01 S=02 W=00	CREDITS = 0 <mark>3</mark> CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Understanding of building elements and introduction to materials used in its construction. Architectural considerations in material selection for structural use and its erection methods for a building.			
Contents	Building Material: Glass, Aluminum, PVC, UPVC etc. Architectural considerations in material selection for structural use.			
	Building Components and i	ts construction techniques:		
	Doors, Windows, Ventilators and Skylights-Their types, materials, treatments to sill, lintel, safety grills ,hardware and fittings, their operational and fixing details.			
	Retaining wall - Design criteria for sizing and positioning of structural elements in the context to type of building; Stability considerations, types of retaining walls, design considerations and recommendation using approximate methods (thumb-rules) with respect to material, ratio etc.; concept of diaphragm wall, design and construction of basement.			
	Recommendation using appr	oximate methods (thumb-rules); concept	of diaphragm wall,	



	Man-Made water bodies: Design criteria for sizing and positioning of structural elements in relation to size and type of swimming pools, garden pools and other water storage concepts. Type, size and shaping of swimming pools, garden pools, overhead water tanks and other water storage concepts- RCC and Steel. Design factors influencing the shape of above. Compound wall and Gate - use, types of compound wall and gates with material, fixing and erection detail etc. Types of foundation/footing variety based on soil type and site conditions; importance of soil and other factors while recommending type of foundation.		
Method	Lectures on materials and construction of building elements, conventional practices etc.		
	Studio exercises, workshops and case studies for above. Site Visit to various factories, designed buildings and market survey		
References	 Barry RConstruction of Building Chudley-Construction Technology Khanna P.NCivil Engineers HandBook Kumar Sushil-Building Construction Rangwala-Building Construction Rangwala-Building Materials Mackey W.BBuilding Construction Mitchell and JBuilding Construction Mitchell and JBuilding Construction Khanna P. N Civil Engineers Handbook Khanna P. N Civil Engineers Handbook Jurnarkar S. B. & Shah H. JMechanics of Structures (I and II) 		
AR 3303 CLIM	IATOLOGY		
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50		
Focus	Built Environment & Climate.		
Contents	To equip students with the required knowledge of the various climatic zones and its climate responsive considerations in architectural design of buildings and built up areas.		

Contents	To equip students with the required knowledge of the various climatic zones and its climate responsive considerations in architectural design of buildings and built up areas.
	a) Climate
	Classification of tropical climatic zones. Micro & Macro climate.
	b) Thermal comfort & principles of Thermal Design-
	Desirable conditions, body heat exchange process, Psychometric chart and thermal balance. Human comfort conditions, comfort chart, comfort zone, effective temperature
	c) Understanding Sun-Solar orientation, Sun angles, sunshine hours, Sun path pattern & shading devices
	d) Ventilation – Air movement & fenestration
	Types of ventilation
	Ventilation design strategies Humidity control and ventilation



	Traditional House Form & Settlement pattern in various tropical climates and vernacular architecture Design Tools – Mahoney Tables, Sun Path diagrams, etc. Day lighting – components, architectural methods of borrowing day light; control of glare.		
Method	Exercises to enhance understanding of above concepts and its application.		
References	Koenigsberger- Manual of Tropical Housing and Building		
AR 3304 HIST	FORY OF ARCHITECTURE - III		
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50		
Focus	To familiarise students with architectural developments from ancient times to 19th Century A.D. in the western world.		
Contents	Development of Western civilization : Early Christian, Byzantine, Romanesque, Gothic Emphasis should be on presenting a chronological picture of architectural developments in the medieval era.		
	Early and Classical Renaissance in Italy and Greater Europe, Mannerism Baroque and Rococo styles in Italy - focusing on spread of European mercantile capitalism and developments.		
Methods	Lecture based Teaching along with documentaries/films, readings etc., with a number of assignments/exercise to encourage self-learning as individuals or in group.		
References	 Arnason H.HHistory of Modern Art: Painting, Sculpture, Architecture Gwilt Joseph-Encyclopedia of Architecture Kostof and Ingersoll RWorld Architecture across cultural History Risebero Bill- Story of Western architecture Sir Fletcher Bannister- A History of Architecture 		
AR 3305 BAS	IC DESIGN AND WORKSHOP - I		
L=00 S=01 W=02	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (JURY) = 50		
Focus	To enhance observation, analysis and volumetric explorations.		
Contents	Analysis of design principles and composition used in a manmade environment using space and volumes in two and three dimensions - volumetric explorations Learning complex structures in nature. Exploring colour schemes and their application in a visual composition through forms and spaces.		
Method	Exploration of exercises with the use of various material mediums.		
References	 Ching D.K. Francis-Architecture : Form, Space & Order Yung M. Frank-Visual Studies Zelenski Paul-Art of Seeing 		



AR 3306 DIGI	TAL ART AND GRAPHICS - I			
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Combination of technical abil software tools	ity, creative problem solving, and an unde	erstanding of the latest design	
Contents	Use of designs in digital medi magazines, brochures, and w publishing.	a, graphic designs to produce images to u ebsites. wide range of industries from adv	se in other types of media, such as vertising to entertainment to	
Method	Use of designing techniques v be introduced. Lab based cou	vith various graphical and design softwar rse involving video, image and vector edit	e. Theory and practical exercises to ting.	
AR 3307 REL	ATED STUDY PROGRAM - III			
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Emphasis on material study and survey.			
Contents	A study for documentation through detailed construction drawings, observations, dialogues etc for the purpose of understanding the construction techniques and materials used. Integration of structural components with construction methods to be observed/studied and documented.			
Method	Specific inputs on the methods of observation, recording, documenting and representing. Understanding about various instruments used for surveying through techniques like chain survey, compass survey etcDocumentation in ascribed ways, accuracy in measuring/drawing; collating the recorded information and drawing to be presented in specified formats and scales.			
PE - 3 PROFES	SSIONAL ELECTIVE - III			
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	To acquaint students with other relevant fields, that compliments the learnings of the built environment and contributes to bringing positivity in the society. The wide array of electives comprehensive learning skill and aptitude towards design.			
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Art Appreciation 2. Vernacular Architecture 3. Architecture design with Steel and Glass 4. Product Design 			
Method	Portfolio and Project Submis	sion		



OE - 3 OPEN ELECTIVE - III				
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc			
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Bamboo 2. Textile 3. Printmaking 4. Sculpture 			
Method	Portfolio and Project Submis	sion		
PRIELUN				

B.Arch. SECOND YEAR : SEMESTER IV					
AR 3401 AR	AR 3401 ARCHITECTURAL DESIGN STUDIO - IV				
L=00 S=09 W=00	CREDITS = <mark>0</mark> 9 CONTACT HRS/WK = 09	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50		
Focus	Analysis of context as a determinant of Architectural character. Study of built form with special reference to climate, material , social & cultural context, physical environment.				
Contents	The objective is to sensitize the students to contextual factors in designing, and apply theoretical knowledge learnt in the previous semester in architectural design exercise. To develop a design to address the aspects of modernity. Factors to Studied - Building materials, Built form & elements, Construction techniques & environmental Performance, Settlement Pattern, Dwelling Typology, Symbolism, Typical features, Cluster & Community - Street Pattern, Traditional design.				
Projects	 Housing studies of existing settlements. Complete architectural design of project/s of different nature at level of residence & small institution/ work place in the context of a traditional settlement. Dwelling cluster design project (15-20 units to form a small community or medium sized public building). Design Projects should address the concepts of shared open space, clustering, community engagement, etc. Emphasis shall be laid on clarity of detail and architectural expression in functional and constructional terms. 				
Skills	Documentation & analysis of Full range of architectural gr	existing / traditional settlements; progra aphic techniques and model making in va	mmed and un-programmed spaces; rious media must be applied.		



References	1. 2. 3. 4. 5.	Alexander Christopher-A Pattern Language Baker Geoffrey- Design Strategies in Architecture Cutler & Cutler-Responsive Environment Pandya Yatin-How the Other Half builds Orr Frank-Scale in Architecture
AR 3402 BUII	LDIN	IG CONSTRUCTION AND TECHNOLOGY - IV

L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Understanding of various building components, their place and composition within the systems, possibilities of different material use. Understanding of principles and possibilities of various erection Technology and their applications.			
Contents	Building Material: Various r	naterials used to construct floor, roof and	staircase and their finishes	
	Building Components and i	ts construction techniques:		
	Floors - Types (wooden, mud, brick, steel, cement, stone etc.), Selection criteria, design criteria			
	Roofs - Types (pitched roof - wood, steel, rcc), Mezzanine floors and Upper floors			
	Vertical Connections - Steps, Staircase, Ramps, Escalators, Elevators, Travelators [Addressing issues of Universal Design]			
Method	Lectures on materials and construction of building elements, conventional practices etc.			
	Studio exercises, workshops and case studies for above. Site Visit to various factories, designed buildings and market survey.			
References	 Barry RConstruction of Barry's-Advanced Construction Te Chudley-Construction Te Khanna P.NCivil Engine Kumar Sushil-Building C Mackay W.BBuilding Co Mitchell and JBuilding Cos Rangwala-Building Construction 	Building ruction of Buildings schnology ers HandBook onstruction construction construction truction, Building Materials	13-	

AR 3403 STRUCTURES - II

L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	To develop the ability to understand the types and behaviour of structural elements under external forces by analysing the stresses especially for indeterminate structures.		
Contents	Definition of determinate and indeterminate structures; Analysis of fixed beam with examples of central point load and uniformly distributed load (symmetric loading conditions only) using formula and shear force and bending moment diagram. Analysis of continuous beam; definition of fixed end moment, carry over moment, relative stiffness and distribution factor; examples for all end with fixity – application of Moment Distribution Method		



	Truss, types of trusses, analysis of two-dimensional trusses using method of joints(Small truss up to 8 – 10 members);		
	Structural conditions in favour of adoption of space frame.		
	Concept and analysis of portal frame – non-sway type portal frames, reasons of sway, difference (Concept only)		
	Concept of deflection of structures and importance of deflection in design of structures(no examples)		
	Arches, types of arches, analysis of three hinged arches.(Only reactions at support)		
Method	Lecture based theory and discussions with illustrations and calculation of examples, Preparation of structural drawing along with schedules.		
References	 Beer & Johnston-Mechanics of Materials Junnarkar S.B. & Shah H.JMechanics of Structures I & II Khurmi R.SStrength of Materials Norris & Wilbur-Elementary Structural Analysis Parikh J.PFundamentals of Structural Analysis & Design Parikh J.PUnderstanding Concept of Structural Analysis Design Punamia B.CStrength of Materials Popov EMechanics of Materials Rawal B.MExperimental Mechanics of Solids 		
AR 3404 HIST	2 3404 HISTORY OF ARCHITECTURE - IV		
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50		
Focus	To create an overall analysis and understanding of the architectural developments from the 19th to 21st century.		
Contents	Contemporary developments in architecture in India and world over. Analyzing the roots of the modern movement. Issues of context, relevance, identity & meaning of architecture in contemporary cultures. Beginning of Modernism – Europe and America; modern movement and the international style; modern masters; Post modernism & Contemporary development.		
Method	The course should be dealt with as a Seminar Course with individual or group seminar presentations on various issues. Guided self-study in an analytical mode should be emphasized.		
References	 Arnason H.HHistory of Modern Arts : Painting, Sculpture, Architecture Bonta Juan- Architecture and its interpretation Kostof Spiro- History of Architecture 		
AR 3405 BAS	C DESIGN AND WORKSHOP - II		
L=00 S=01 W=02	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (JURY) = 50		
Focus	To explore concepts of abstraction and ideation in design.		



Contents	The design process and role of abstract concepts and ideas as an ordering mechanism.[Symbolism and communication, identity, character and imageability, etc] Exploring qualities like light and colour, texture & scale and its usages in expressing design concepts			
Method	Exercises to explore and analyse the above aspects for selected architectural projects.			
References	 Ching Francis D.KArchit Yung Frank MVisual Stu Zelenski Paul-Art of Seein 	 Ching Francis D.KArchitecture: Form Space & Order Yung Frank MVisual Studies Zelenski Paul-Art of Seeing 		
AR 3406 COM	IPUTER STUDIO - II			
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	To help students to understand the advanced computer skills & application of computers to prepare 3D drawings in the field of architecture.			
Contents	Techniques for preparing 3D Architectural Drawings using softwares like - AutoCad, ArchiCad, Revit, Sketchup etc.			
Method	Use of computer software by	giving preliminary exercises.	50	
AR 3407 RELATED STUDY PROGRAM - IV				
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Regional and contextual study with respect to climate			
Contents	Any site or building may be selected for responses to specific urban and natural environments. Context can be seen as a set of values that incorporate, not only the immediate but the wider context of a building into its design.			
Method	Specific inputs on the methods of observation, recording, documenting and representing. Documentation in ascribed ways, accuracy in measuring/drawing; collating the recorded information and drawing to be presented in specified formats and scales.			
PE - 4 PROFESSIONAL ELECTIVE - IV				
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	To acquaint students with ot and contributes to bringing p skill and aptitude towards de	To acquaint students with other relevant fields, that compliments the learnings of the built environment and contributes to bringing positivity in the society . The wide array of electives comprehensive learning skill and aptitude towards design.		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Art Appreciation 2. Vernacular Architecture 3. Architecture design with Steel and Glass 			



	4. Product Design				
Method	Portfolio and Project Submission				
OE - 4 OPEN	ELECTIVE - IV				
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	REDITS = 02INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00			
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc.				
Contents	A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : Bamboo Textile Printmaking Sculpture 				
Method	Portfolio and Project Submission				
	1 P.		C		

B.Arch. THIRD YEAR : SEMESTER V			
AR 3501 ARC	CHITECTURAL DESIGN STUDIO - V		
L=00 S=09 W=00	CREDITS = 09 CONTACT HRS/WK = 09INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (JURY) = 50		
Focus	Design of Institutional Campus/Complex .Understanding the character of Institution. The objectives of this studio is to expose the students to the challenges of designing functionally complicated buildings, having a complex array of activities and services		
Contents	 Emphasis on the design of services intensive, multi-storeyed, such as buildings for health care, hospitality institutional or multifunctional commercial usage. Design focuses on a closed environment, with emphasis on interior spaces, integration of various services. The external environment to take into consideration, site planning circulation of emergency vehicles and parking. Organization and disposition of spaces. Relationship of different functional, service and movement areas. Diversity of user groups, circulation routes. User group needs and client requirements. Influence of culture, climate & technology. Site planning/layout/zoning/ circulation. Landscaping and sustainability aspects. Idea of an Institutional image/character. Ordering theme / idea / concept. 		
Projects	Design of an Institution of medium level complexity with a mix of functions. The design studio may be closely synchronised with the working drawing studio in the upcoming semester.		



	NASA Briefs for ANDC or other trophies may be refined to be taken up as studio programmes in part or full.		
References	 Baker Geoffrey-Le Corbusier - An Analysis of Form. Giedion Sigfried-Space Time & Architecture- The Growth of a New Tradition. 		
AR 3502 BUI	LDING CONSTRUCTION AND	TECHNOLOGY - V	
L=01 S=00 W=00	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	Understanding the behaviour of concrete and steel as building material and their arrangement possibilities. Building elements and components, different processes and products.		
Contents	Building Material: Materials use to protect building		
	Building Components and i	ts construction techniques:	
	Protection to Buildings - DPC	, Water proofing, Thermal insulation, Ant	i termite treatment
	Safety measures in Buildings	- Fire, Earthquake, lightening, Expansion	- construction joints.
	Concept of Earthquake forces structure, provisions of IS Co	s, Causes, types and parameters, Understa de. Methods of Repairing and Retrofitting	nding of Ductile detailing of R.C.C.
	Concept of Timber structures. Introduction to relevant IS codes.		
	Geodesic forms. Shell structures. Introduction to shell structures, types of shells, folded plate, its formation and design concept.		
	Study & need of composite structures, shear connectors.		
	Long span <mark>s</mark> tructures - Types of RCC slab, shell, vaults, folded plates, cable structure, RCC box girder, large- span slabs, tensile structure, pneumatic and membrane structures		
Method	Lectures on materials and construction of building elements, conventional practices, construction of high rise buildings, safety measures etc.		
	Studio exercises, workshops and market survey.	and case studies for above. Site Visit to va	rious factories, designed buildings
References	 Barry R-Construction of Chudley-Construction Te Khanna P.N- Civil Engine Mackay W.BBuilding Co Mitchell and J-Building Co Moorthy-Building Constr Punamia B.C-Building Co Ramannathan-Building Co Rangwala-Building Constr Sushil Kumar-Building C P. N. Khanna-Civil Engine H.J.Shah-Design of R.C.C. Timoshenko -Theory of H National Building Code E 	Building echnology ers HandBook onstruction onstruction ruction construction construction truction rials onstruction eers Handbook Structures Plates & Shells Plates & Shells Plates William	



AR 3503 BUILDING SERVICES				
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Understanding of building services - Water Supply, Waste Disposal, Electrical and Mechanical Systems			
Contents	Building Services - Water Supply and Waste Disposal. Building Electrical Services, Communication Systems and Air conditioning. Mechanical Circulation, automated system, artificial water bodies.			
	Water Supply - Sources, demand & elements of the system, layout and design of system, connections with municipal supply at City level , rainwater harvesting systems. Lay out for water supply, drainage & rain water system including calculations for storage units e.g. underground and terrace tanks for a unit (Bungalow/ Tenement/ Flat/ Townships)			
	Waste disposal - Sullage and sewage. Various systems of waste removal and disposal. Fitting of various elements of the system, layout design for a unit (Bungalow/ Tenement/ Flat/ Townships). Septic Tank – Necessity, Constructional and operational features			
	Sewage Treatment Plant and Filtration Systems-Necessity, Constructional and operational features			
	Storm water disposal systems - combined and independent systems.			
	Electrical Services - Power Connection, A.C. & D.C., conduits, distribution board and fuses, Wiring System (concealed & open) fixtures, design of layout and symbols for representation. Communication systems (telephone, fax, EPABX etc.) and their layouts and connections.			
	Air conditioning and mechanical ventilation, Importance of Air Conditioning, Types of A/C., Components of an A.C. system. , ducting, layout and design drawings. ARSCUE treatment.			
	Lifts/ Escalators/ Travelator	s : General de <mark>sign, Classif</mark> ication, Installat	tion, NBC norm <mark>s</mark> & guidelines	
	Automated systems: Alarm systems, automatic lighting and A.C. systems, door closing / opening etc.			
Method	Basic information to be given in lectures and application shown in case studies. A market survey for materials and rates should be carried out in order to include new products in the market.			
	Preparation of drawings for water supply, drainage and rainwater collection and disposal system for a unit or cluster of units, Electrical layout of a small unit, layout of MEP systems etc.			
References	 Arthanari S Building Technology & Valuations (Tata McGraw Publication) Birdie G.SWater Supply & Sanitary Engineering Barry's-Advanced Construction of Buildings Bureau of Indian Standard-National Building Code, (New Delhi) Crosbie M,Watson D Time Saver Standards for Architecture F.Halls-Building Services Rangwala-Public Health Engineering McGuiness William J Mechanical & Electrical Equipment for Building Rao B.V.SOperation & Maintenance of Electrical Equipment Uppal S.LElectrical Wiring, Estimating & Costing 			
AR 3504 THE	EORY OF ARCHITECTURE			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	



Focus	Understanding design and design in history. Theory of Architecture will explore significant principles and theoretical issues in the architectural design and practice.		
Contents	Role of the designer in changing society: classification of design.		
	Understanding Theories through Art, Architecture and Design. Traditional theories of architecture		
	To comprehend the concepts of architecture.		
	To understand and analyze the principal elements of Architecture.		
	To identify and examine the thought process involved in design.		
	Definitions of Architecture - Origin of Architecture – Architecture as a discipline - Functional, aesthetic and psychological - Concept of space and of Place, form, proportion, scale, design principles Outline of components and aspects of architectural form expression, character, and experience – Introduction to the formal vocabulary of architecture and visual perception.		
Method	Theories and models of the design process. Creativity and techniques to enable creative thinking; creativity in architecture; pattern language and participatory approach to design. Lectures and investigation by the students of existing literature and case studies through series of seminars, discussions, critical writing and book reviews.		
References	 Elam Kimberly-Geometry of Design: Studies in Proportion and Composition Smith Korydon- Introducing Architectural Theory: Debating a Discipline. Ots Enn- Decoding Theory speak: An Illustrated Guide to Architectural Theory. Davies Colin- Thinking about Architecture: An Introduction to Architectural Theory. Vitruvius P. & Morgan, M. H-Vitruvius: The ten books on architecture. Palladio Andrea-The Four Books of Architecture. 		
AR 3505 SPE	CIFICATION, COSTING, ESTIMATION AND BUDGETING		
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50		
Focus	Understanding Quantity Surveying & Estimate preparation.		
Contents	Specification: Specification of different building items - general specification and detailed specification.		
	Rate Analysis: Meaning, Importance, Purpose and use, factors affecting rate analysis. Rate analysis of major items of building work. Factors affecting, cost of work task work general information regarding schedule of rates.		
	Estimates : Method of computing quantities, mode of measurement of all items of work, units of measurement		
	Detail listing of Material requirement for above items		
	Bill of Quantities: Measurement Book its entry checking and preparation of bill etc. standard measurement book.		
	Over and above the mentioned items, Estimate of Septic Tank, Soak Pit, Sanitary item – Plumbing, Electrification. Rate analysis of all major items to be prepared.		



Method	Basic information to be given in lectures and application through a case specific study. A market survey for materials and rates should be carried out in order to include new products in the market.		
	Preparation of drawings, journal and bill of quantities.		
References	 Dutta B.NEstimation & Valuation Chakravarti Estimation & Valuation RangwalaEstimation & Valuation RangwalaQuantity Surveying 		
AR 3506 DIG	TAL ART AND GRAPHICS - II		
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	Course involving video, image and vector editing using editing software; scripting; presentation using voice over.		
Contents	Use of designs in digital media, graphic designs with the help of scripting to produce images to use in other types of media, such as magazines, brochures, and websites. wide range of industries from advertising to entertainment to publishing.		
Method	Use of designing techniques with various graphical and design softwares. Theory and practical exercises to be introduced.		
AR 3507 REL	07 RELATED STUDY PROGRAMME		
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To enhance observation and understand detailing of institutional buildings, high rise/ typical structures. Construction and new buildings: models of contemporary architecture practices.		
Contents	Visit/s to site/s institutions to understand its working through sketching its functional layout, constructional details, site planning features, mechanical services, natural landforms and landscape. Any site or building may be selected in new paradigms of architecture along with a set of indicators and sustainable architectural strategies to achieve an integrated design.		
Method	Specific inputs on the methods of observation, recording, documenting and representing. Documentation in ascribed ways, accuracy in measuring; collating the recorded information and drawing them up in specified formats and scales.		
PE - 5 PROFES	SSIONAL ELECTIVE - V		
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To acquaint students with other relevant fields, that compliments the learnings of the built environment and contributes to bringing positivity in the society. The wide array of electives comprehensive learning skill and aptitude towards design.		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Contemporary Processes in Architecture 2. Architectural Journalism 		



	 Earthquake Resistant Architecture Disaster Mitigation and Management Cartography and Advanced mapping techniques 	
Method	Portfolio and Project Submission	

OE - 5 OPEN ELECTIVE - V

L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc.		
Contents	A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Behavioral Science and Environmental Psychology 2. Stage/Set/Exhibition Design 3. Advanced Climate Design 4. Artificial Illumination 5. Building Economics 6. Parametric Design		
			7

	B.Arch. THIRD YEAR : SEMESTER VI			
AR 3601 ARC	CHITECTURAL DESIGN STUDIO - VI			
L=00 S=12 W=00	CREDITS = 12 CONTACT HRS/WK = 12INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (JURY) = 50			
Focus	Architectural detailing and execution drawings. To train the students to prepare detailed Working drawings for effective execution at construction site, preparation of integrated services drawings, and detailing for various types of drawings and methods of transmittals and record keeping.			
Contents	Execution drawing systems and methods.			
	Trade literature, detailing methods, architectural working drawing.			
	Choice of materials, fixtures, fittings, availability and constructional feasibility.			
	Integration of building systems and services.			
	Detailed drawings to include all components of building like doors, windows, lifts, staircases, elevators etc. Construction drawings of previous semester design project (part or full) including specifications & estimations.			
	Additional design project (small) may be taken alongside for development to complete architectural detailing.			
	Full set of working drawings for the project including municipal clearance drawings			



Projects Construction drawings of previous semester design project (part or full) including specifications & estimations. Additional design project (small) may be taken alongside for development to complete architectural detailing.

Full set of working drawings for the project

AR 3602 BUI	ILDING CONSTRUCTION AND TECHNOLOGY - VI			
L=01 S=02 W=00	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Understanding the construct	ion process of Interior Construction and r	naterial use.	
Contents	 Building Material: Material used in Surface Finishes - internal external, furniture, Building Interior Components and its execution: Interior - walls, ceiling. Exterior - walls, vertical surfaces Kitchen - platform, appliances, finishes Cabinets and Furniture - kitchen cabinets, wardrobes - design, material used, types, accessories, hardware's Partitions - Design, construction details, finishes Paneling - Design, construction details, finishes False Ceiling - Design, construction details, materials, finishes Vertical Facade Treatment - Structural glazing, Alco paneling etc. 			
Method	Case stud <mark>ie</mark> s, Site visits, <mark>Trad</mark>	e literature collection Studio exercises	S Second S	
References	 Ashcroft Ronald-Construction for Interior Designers by Ching K. Francis- Form, Space & Order Charlotte Baden Powell- Architects Pocket Book of kitchen Design Van Nostrand Publication-Graphic guide to Interior Design 			
AR 3603 STR	3603 STRUCTURES - III			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50			
Focus	Designs of RCC structural members and to develop problem solving ability related to the same. To develop the ability for positioning and sizing of the elements.			
Contents	Definition of Permissible stresses, balanced section, under reinforced and over-reinforced section; Design methods of R.C.C. structures : working stress method and Limit State method; Use of Code of special practice for R.C.C. members. (I.S. 456 – 2000) Design of singly reinforced and doubly reinforced beams – Flanged Beams as ELL beams and T-beams; Design of shear reinforcements – arrangement alternatives for beams. Design of simply supported one way slab, two-way slab & continuous slabs. Concept of flat slab, grid floor –			

Axially and eccentrically loaded columns, types of columns; Design of axially loaded columns (square,



	rectangular) & reinforcement detailing (square, rectangular and circular);		
	Design of isolated footing for columns (square & rectangular).		
	Concept of 'Hinge' in RCC members.		
	Pre-stressed and post-tension concrete structure – conditions for adopting of pre-stressed concrete beams and girders. Advantages, Materials required, Systems and methods of pre-stressing, losses of pre-stressing, Analysis of beam section – stress concept.		
Method	Theory and discussions, calculation of examples, Preparation of structural drawing along with schedules		
References	 Arya A.S.& Ajmani J.LDesign Of Steel Structures Bresler B, Lin T. Y & Scalzi J-Design Of Steel Structures Bindra S.PBuilding Construction Duggal S.K Design Of Steel Structures Jain A.KDesign Of Steel Structures Jain & Jaykrishna-Plain & Reinforced Concrete Ramchandra-Design Of Steel Structures Ramgwala- Building Construction Rao K.LDesign Of R.C.C. Structures Ramchandra-Limit State Method Of R.C.C. Design Shah H.JDesign Of R.C.C. Structures Scode - 456 - 2000, Code Of Practice For Plain & Reinforced Concrete BIS, New Delhi IS Code - 875 - 1987, Code Of Practice For Design Loads. BIS, New Delhi S.P 16 Design Aids to IS 456 BIS, New Delhi IS Code 800- 1984 - Code Of Practice For Structural Steel Design BIS, New Delhi National Building Code BIS, New Delhi 		
AR 3604 LAN	IDSCAPE AND SITE PLANNING		

L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Principles of Landscape design, its techniques and application. Understanding Ecology, Ecosystem, environmental conservation, Landscape Engineering and Planting design			
Contents	a) Introduction through the interface between architecture and landscape.b) study of natural processes and system further divided into			
	Part 1 Components of ecology - Biotic, Abiotic What is ecosystem? Various types of ecosystems. Conservation of natural resources. Rainwater harvesting. Ecology and importance of environment in ecology.			
Part 2 Reading Landscapes : Introduction to landforms. Site interpretation through grai contour maps- Leveling Equipment used principles and practice. Taking vertical and hori measurements on plain and contoured sites, calculation of areas, mapping contours and s Analytic, artistic and technical aspects of designing open spaces at different scales. Drawi representation of landforms.		tation through grains, topo-sheets and ng vertical and horizontal ping contours and site profiles etc. erent scales. Drawing and		



	c) History of landscape architecture through the study of selected site			
	d) Introduction to Botany, plant types, coding and making herbariums			
	e) Introduction to Site planning - Topography analysis, Scientific techniques of site analysis- case studies; Methodology of preparing a site analysis diagram and mapping, Landscape suitability analysis.			
	f) Introduction to principles of landscape design			
Method	Studio Exercise, Site Visit, Seminar, Presentation etc. Design assignment may be done as part of a Studio project. Preparing Landscape design presentation drawing (using symbols etc.)			
	Specific inputs on the methods of observation, recording, and representing.			
	Documentation in ascribed ways, collecting recorded information and drawing them up in specified formats and scales.			
References	 Bose & Chaudhary-Tropical Garden Plants Laurie Michael-Introduction to Landscape Architecture Reid Grant-Landscape Graphics Walker Theodore D. & Davi David A-Plan Graphics 			
AR 3605 ADV	ANCED COMPUTER SKILLS			
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00			
Focus	To help students to develop advanced skills of design software's.			
Contents	Grasshopper, Rhino, Lumion, V-Ray etc.			
Method	Use of computer software by giving preliminary exercises.			
AR 3606 REL	ATED STUDY PROGRAMME			
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00			
Focus	Role of landscape and landform in enhancing and improving the quality of building environs, functionally and aesthetically.			
Contents	Study of built form should be selected having a relation to an existing natural setting with a strong connection to its larger system. It may celebrate natural elements as key design parameters, to focus the inherent connection between the built environment and its surrounding.			
Method	Specific inputs on the methods of observation, recording, documenting and representing. Documentation in ascribed ways, accuracy in measuring; collating the recorded information and drawing them up in specified formats and scales.			



PE 6 PROFESSIONAL ELECTIVE VI			
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To acquaint students with other relevant fields that compliments the learning's of the built environment and contributes to bringing positivity in the society. The wide array of electives comprehensive learning skill and aptitude towards design.		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : 1. Contemporary Processes in Architecture 2. Architectural Journalism 3. Earthquake Resistant Architecture 4. Disaster Mitigation and Management 5. Cartography and Advanced mapping techniques 		
Method	Portfolio and Project Submission		
OE-6 OPEN	ELECTIVE - VI		
L=00 S=00 W=02	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	To help students in exploring their aptitudes and in developing skills in any related field like painting, sculpture, sketching ceramic work, photography etc.		
Contents	 A number of subjects shall be offered depending on faculty availability. Students may register for any one of the offered courses for the semester. Courses that may be offered from time to time : Behavioral Science and Environmental Psychology Stage/Set/Exhibition Design Advanced Climate Design Artificial Illumination Building Economics Parametric Design 		
Method	Portfolio and Project Submission		
		Come	

B.Arch. FOURTH YEAR : SEMESTER VII				
AR 3701 ARCHITECTURAL DESIGN STUDIO - VII				
L=00 S=12 W=00	CREDITS = 12 CONTACT HRS/WK = 12	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50	
Focus	The students are expected to design in a climate responsive and environment friendly way while planning medium sized housing complexes. Application of appropriate strategies for low-cost housing/affordable/high-end housing with the knowledge learnt in the previous semesters to be done.			
Contents	Study of a Housing designs & Urban neighborhoods to understand the nature and character of user group, historical development and future growth trends, socio-economic and environmental characteristics, issues of density, land use and ground coverage.			
	Analysis of land use, ground coverage, density, building line, housing typology, transport and circulation			



	systems, form & character of built- environment and open spaces.			
	Influence of climate and geo-physical attributes of the location.			
Projects	Studies and analysis of multiple aspects of emergent design pattern of settlement, synthesis of diverse requirements. Housing design for a rapidly urbanizing settlement in the vicinity or a sector of a large urban area for varied user groups after			
References	 Caminos Horatio-Urbanization Primer Correa Charles-The New Landscape Gallion-Urban Pattern Rapoport Amos-House Form and Culture Vastu-Shilpa Foundation for Studies and Research in Environmental Design- Residential Open Spaces 			
AR 3702 AD	/ANCED STRUCTURES			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (THEORY) = 50			
Focus	Developing ability and exposure of designing and placement of structural elements using steel and composite structures.			
Contents	Introduction to structural steel- Rolled steel sections.			
	Use of Code of special practice for Steel members. (I.S. 800 – 2007)			
	Design of Tension members, compression members & flexural members.			
	Types, arrangements, symbols of connections – Riveted, welded and bolted. Methods of riveting, welding, and bolting; Design of Bolted connections; failure conditions in the connections.			
	Introduction to footings for steel columns(design of a slab-base only)			
	Concept of built-up beams and columns – recommended uses.			
	Concept, applications and importance of lacings, battening & bracings.			
	Introduction to Plate girders and castellated sections.			
	Conceptual study of general connections – Beam to beam connections – Beam to column; column to column connections at slab/floor; column to foundation connection.			
	Structural conditions in favour of adoption of space frame.			
	Concepts related to construction of High-Rise Buildings			
	Conditions under which masonry structures are recommended, design criteria for masonry structures; Application of relevant IS codes.			
Method	Theory and discussions, calculation of examples, Preparation of structural drawing along with section specification detailing.			
References	 Belenva EPre Stressed Metal Structures LinT V. Pre Stressed Concrete Structures 			
	2. Emission of Steel Structures 3. Timoshenko- Theory of Plates & Shells Arya & Ajmani -Design of Steel Structures			



- 4. Jain A.K.-Design of Steel Structures
- 5. Duggal-Design of Steel Structures
- 6. Bresler, Lin & Scaly-Design of Steel Structures Design of Steel Structures by Arya, Kumar
- 7. Ramchandra-Design of Steel Structures
- 8. IS Code 800–1984 Code of Practice for Structural Steel Design BIS, New Delhi
- 9. IS Handbook 1, Structural Sections & Properties BIS, New Delhi
- 10. National Building Code BIS, New Delhi
- 11. IS Code 875 1987, Code of Practice for Design Load, BIS, New Delhi

AR 3703 BUILDING REGULATION AND INFRASTRUCTURE SERVICES

L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
PART A	BUILDING REGULATIONS		
Focus	Regulations for development control and quality as a means of ensuring minimum standards of building performance.		
Contents	 Need and rationale for development and building control, prevailing legislation (various Acts) under which Rules and Regulations have been worked out, National Building Code. Definitions and explanation of various terms like Act, Rules, Regulation, Development Plan, Planning Authority, Local Authority, Built-up Area, Building Unit, FSI / FAR, Plot coverage, Margins, setbacks, Development permissions, occupancy certificate etc. General development requirements and regulations in Gamtal and Revenue Survey areas, for Industrial Areas, Low cost Housing and other special structures. 		
	Procedure for securing Development permission and documents required (URDPFI, NBC, RERA, CREDAI, NHAI etc.)		
PART B	INFRASTRUCTURE SERVIC	ES VALLABH	8
Focus	Settlement Infrastructure Services		
Contents	Roads - Types, alignment, width and carriage width of roads, shoulders, curves, super elevation, curbs etc. (Geometric Design). Parking spaces, rules & general requirements.		
	Lighting-arrangement of street lighting, density, spacing height etc., Location of transformer substation & their spatial requirements.		
	Telecommunication-Various modes of telecommunication, relevance with planning, and precautions to be taken while planning including spatial requirements.		
Method	Case Studies, site visits, trade Literature collection, presentations, inputs from industry experts, studio exercises, etc.		
References	 Banerjee D.NBuilding Rules for Metropolitan Calcutta Birdie G.SWater Supply & Sanitary Engineering Khanna S.K-Road & Transportation Engineering Kopardekar H.DUrban & Regional Planning 		



- Rangwala-Public Health Engineering
 Halls F.-Building Services
 Gujarat Town Planning and Urban Development Act 1976 by Govt. of Gujarat Publication

AR 3704 HU	HUMAN SETTLEMENTS AND PLANNING			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	To acquaint the students with the development in the field of Town Planning/Urban Design / Settlement design in association with the important role of architecture, building profile offering image and identity to the place.			
Contents	History of Town Planning/Evolution of Settlements overtime/Urban design.			
	Various Theories, concepts and approaches of planning. Examples of various historical experiments across the world.			
	Developments in India from	early times to the present day.		
	Vedic Planning concept, Islar	nic planning, western planning.		
	Role of Sir Patrick Geddes & others in planning processes. Contemporary practices-evolution of sustainable, smart, resilient cities. Role of Urban laws in city making.			
	Master Pl <mark>an</mark> , Development pl	an, TP Scheme & their procedure.	and a	
	New evolving practices- Riverfront development, Eco-city concepts, Transit Oriented Development, Smart city mission, Heritage City development scheme etc.			
Method	The course is mainly intended to be lecture based, with case studies and illustrations.			
References	 Begde V. Prabhakar-Ancient & Medieval Town Planning in India by Dagens BrunoMayamatam Part I & II Kopardikar H.D & Diwan G.RUrban & Regional Planning, Principles, Practicing & Theory Morris AEJ-History of Urban Form by Jain K.B. & Jain Minakshi-Indian Cities in Arid west Rangwala-Town Planning in India Snodgrass Adrian-Architecture, Time & Eternity History of Human Settlements, ITPI manual URDPFI Guidelines Vol. I and II Gujarat Town Planning and Urban Development Act 1976 by Govt. of Gujarat Publication 			
AR 3705 DES	IGN SEMINAR I			
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Theory, techniques and issue	es in design of residential areas.		
Contents	Housing: History and theorie	s, issues and scope, typologies		
	Elements of Housing: Built-fo linkages, concepts of density and forms, relationship of bu	orm, open spaces and circulation, infrastru - gross density, net residential density, ar ilt form density, F.S.I. etc.	acture & amenities, hierarchy of eas per person, building typologies	



Method	Basic information to be in the form of lectures with case studies and illustrations. Students are to examine views related to housing design through assignments concluding with a seminar presentation.		
References	 Caminos Horatio-Urbanization Primer Charles Correa-The New Landscape Gallion-Urban Pattern Rapoport Amos-House Form and Culture Vastu-Shilpa Foundation for Studies and Research in Environmental Design- Residential Open Spaces 		
AR 3706 BUII	LDING INFORMATION MODELLING		
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00		
Focus	To integrate new ideas of having a comprehensive 3D intelligent model		
Contents	Process to create intelligent virtual models to integrate the project data from design to construction and operations.		
Method	Lab based course to build comprehensive Building Information Models (BIM) using appropriate Digital software and Media; BIM for building energy simulation; BIM for cost estimating, project phasing and administration.		
AR 3707 CON	STRUCTION PROJECT MANAGEMENT		
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00		
Focus	Understanding project planning and management.		
Contents	Nature of construction projects, need for proper planning and management processes and equipment's used. Techniques for scheduling: bar charts, network diagram, project evaluation and review techniques, Critical		
	path Method.		
	Maintenance of records hills and method of making navments		
Method	Lecture based with a series of exercises on various management techniques.		
References	 Lecture based with a series of exercises on various management techniques. Joy P.KTotal Project Management Moder J.J Project Management, CPM, PERT & Precedency Programming Srinath L.F PERT & CPM-Principles and Applications Weist & Len- Management Guide to PERT & CPM 		



B.Arch. FOURTH YEAR: SEMESTER VIII					
AR 3801 ARC	AR 3801 ARCHITECTURAL DESIGN STUDIO - VIII				
L=00 S=15 W=00	CREDITS = 15 CONTACT HRS/WK = 15	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50		
Focus	To evaluate the ability of stud architectural character and c	lents to deal with and resolve complex iss ontext in an Urban Setting.	sues into a valid expression of		
Contents	Architecture for the Public Domain to be emphasized through detailed study and analysis of a town/ or parts. Design resolution for a project in the urban fabric selected within a given town, with the intention of developing individual designs for diverse projects within overall conceptual development for the settlement. A comprehensive resolution of all aspects of the project- detailed design, control mechanisms, structure and materials, landscaping etc. must be stressed.				
Projects	Projects could be of the following nature: Urban infill, Slum Up-gradation, Conservation and Revitalization of core areas, new development etc. Number of likely projects of diverse nature may be offered for choice by students. Emphasis should be on an in-depth study of all issues related to the project and an individual resolution.				
References	 Alexander Christopher-The New Theory of Urban Design Bacon Edmund-Design of Cities Barnett Jonathan-Urban Design as Public Policy Corbusier Le-Cities of Tomorrow Cullen Gordon-Concise Townscape Gosling David-Concepts of Urban Design Krier Rob-Urban Space Lynch Kevin- Image of the City Shirvani Hamid-The Urban Design Process Sprieregen Paul-Introduction to Urban Design Trancik Roger-Finding Lost Space 				
AR 3802 ENV	VIRONMENTAL SCIENCE AND	GREEN CONCEPTS			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50		
Focus	To introduce the basics of en Getting acquainted with gree green/energy efficient buildi	vironmental science and its relevance to r n concepts in general and knowing desigr ngs/sites.	nankind, the built envelope around. n strategies for high-performance		
Contents	Introduction to Ecosystems a	nd Environment, environmental resource	25		
	Bio-diversity and its conserva	ation			
	Environmental problems in I	ndia			
	Social issues and Environmer	nt			
	Institutions and Governance				
	Introduction to sustainability	r, Green buildings & intelligent buildings, i	impact of building		



	construction/industry on environment,			
	Methods and tools of building assessment, the green building process, green rating systems and documentation, site and landscape strategies, building energy system strategies, material selection strategies, Indoor environmental quality, carbon accounting, green building codes; energy management systems			
Method	Theory, case studies and ana	lysis.		
References	 Sharma P.DEcology and Environment Wright Richard TEnvironmental Science Agarwal, K. CEnvironmental Biology. Benny, JEnvironmental Studies Bharucha, EText book of environmental studies for undergraduates courses. Brunner, R.CHazardous Waste Incineration. Kaushik A. & Kaushik C. PBasics of Environment and Ecology. Day CPlaces of the soul: Architectural and environmental design as a healing art. Green Building Handbook Volumes 1 and 2_A Guide to Building Products and their Impact on the Environment Greentech Environmental Services GRIHA Manual_Vol I IGBC Green New Buildings Rating System (Version 3.0 with Fifth Addendum)(1) 			
AR 3803 ACC	DUSTICS			
L=02 S=00 W=01	CREDITS = <mark>0</mark> 3 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50	
Focus	Understa <mark>n</mark> ding sound contro	l as an important element in creating com	fortable functional spaces.	
Contents	Sound -Properties of Sound , room acoustics . Acoustical defects, sound absorbing materials and sound proof construction. Reverberation, Reverberation time for speech and music and its calculations. Acoustical requirement of various building types. Understanding Auditorium design – defects, ways of overcoming these defects. Noise Control: Means and measures for control, noise insulation and noise control requirements, constructional details and performance. Environmental Noise Control.			
Methou	Mainly lecture based. Case Studies and project work of buildings like auditoriums, theatres, convention halls, etc. Market survey of various materials. Talks and discussions with experts.			
References	 Doodle Leshi LEnvironmental Acoustics & Architectural Design Egan David-Architectural Acoustics Moore J.EDesign for Good Acoustics 			
AR 3804 RES	EARCH METHODOLOGY - I			
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	



Focus	To acquaint students with research in the field of architecture along with various techniques and methodology adopted to conduct research.		
Contents	Nature and function of research, scientific research, meaning of research in the field of architectural design.		
	Pure and applied research. Nature of an undergraduate thesis, its structure and other requirements.		
	Stages of research and design; design and research methodology		
	Forms of research reporting, structure of a report, writing skills, presentation aids. Use of primary and secondary references, bibliography, notations, cross reference etc.		
	Topic of interest shall be selected by student which can further lead to an architectural intervention in design thesis. Framing of synopsis: introduction to your topic, aim, objectives, research questions, scope limitations, methodology.		
	Techniques of data collection.		
	The areas of public concern and related issues can be touched upon as-		
	Architectural Programming and Interpretation of the Contexts		
	Urban Design and Conservation		
	Landscaping		
	Ordering themes/Ideas and Concepts		
	Perception of Spaces		
	Psychology and Human Behaviour		
	Sustainable Practices and Green Concerns.		
Method	The course must be conducted as a mix of lectures/discussions with a number of assignments and exercises to impart the skills necessary for carrying out the dissertation.		
References	 Cresswell John WResearch Design-Qualitative, Quantitative and Mixed Method Approaches Barrass Robert-Scientist must write Kothari N.RResearch Methodology Snuder James CArchitectural Research 		
AR 3805 DES	IGN SEMINAR-II		
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00		
Focus	Design Seminar will explore significant design and theoretical issues in the design of urban areas.		
Contents	Brief history of Urban design, its scope and examples.		
	Basic concepts, principles and techniques.		
	Theories and approaches of eminent designers and theoreticians with illustrative cases.		



	Structure and elements of urban areas, nature and development.	
	Contemporary approaches to urban design.	
	Urban Issues and aspects: Physiological and symbolic dimensions of built spaces, Responsive design - Nature, Man and Technology, Design values for heritage, ecology and culture.	
Method	The course is expected to provide the inputs required for the Design Studio through lectures and discussion, also to encourage enquiry and investigation into existing literature by the student to elaborate on contemporary issues and cases.	
References	 Gosling David-Concepts of Urban Design Bacon Edmond-Design of Cities Lynch Kevin-Image of the City Sprieregen Paul-Introduction to Urban Design Cullen Gordon-Concise Townscape Barnett Jonathan-Urban Design as Public Policy Trancik Roger-Finding Lost Space Krier Rob-Urban Space Shirvani Hamid-The Urban Design Process Corbusier Le-Cities of Tomorrow Alexander Christopher-The New Theory of Urban Design 	
AR 3806 ARCHITECTURAL CONSERVATION		
L=00 S=00 W=03	CREDITS = 03 CONTACT HRS/WK = 03INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Application of Architectural and Urban conservation. Conservation of historical monuments, buildings and sites.	
Contents	Architectural Conservation: Need and Importance of conservation of historical monuments and buildings; preservation and restoration of buildings; Grading & Listing; various issues and practices of Conservation; various agencies involved worldwide; Legislation, Bye laws and policy framework. Study of various charters, organisations and institutes at International and National level. Urban Conservation: Identification of areas for conservation. Approaches and techniques. Cultural Landscapes: Concept, maintenance and management of conserved context.	
	Restoration of old buildings: condition mapping; materials used, techniques and equipment. Deterioration and Preventive measures.	
Method	Live historic site/ Complex/ City could be taken for documentation, condition mapping, listing & grading, state of conservation and architectural interventions. Guest lectures by practitioners for ground realities.	
References	 Feilden Bernard-Manual for Conservation by Feilden Bernard- Conservation of Historic Building 	



B.Arch. FIFTH YEAR : SEMESTER IX

AR 3901 INTERNSHIP [PRACTICAL TRAINING]			
L=00 S=00 W=00	CREDITS = 30 CONTACT HRS/WK = 30- 40	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 00	UNIVERSITY EXAMINATION (JURY) = 100
Focus	To equip students with a practical approach to implement building projects, basic knowledge about the construction industry, project management techniques needed for managing and coordinating building projects in a professional manner under a Council of Architecture registered Architect.		
Contents	The objective of the practical training is to expose the students to working in real life projects. The students are expected to work under the supervision of experienced architects registered with the Council of Architecture to understand how various components related to architecture are applied. As part of their practical training, the students are expected to work on presentation/ working drawings, specifications and quantity estimation. The students are also expected to familiarize themselves with coordination of structural and services drawing With architectural drawings. It is desired that the students undertake site visits and understand construction practices.		
Method	At the end of the practical training, the students are required to present selected works, which are best representative of the training undergone in the form of drawings. The students are also required to submit a report describing various concepts learnt during training, experiences of site visit and estimation / costing activities etc. Training attendance log sheets shall also be submitted as part of the report. The report requires to be submitted for internal assessment.		

B.Arch. FIFTH YEAR : SEMESTER X			
AR 31001 DESIGN THESIS			
L=00 S=18 W=00	CREDITS = 18 CONTACT HRS/WK = 18INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50UNIVERSITY EXAMINATION (JURY) = 50		
Focus	Undergraduate Design Thesis is intended to evaluate the students capacity to understand, analyse and resolve complex issues related to Architecture.		
Contents	 The Thesis is intended to evaluate the student's capacity and maturity in the field of Architecture. Study in the chosen field to be carried out in two stages : a) Data collection & analysis An in depth investigation into the aspects of the chosen area. Analysis of data, inferences to establish underlying principles. Reviews of existing practices / theory in view of current contexts b) Architectural Design Prepare detailed programme 		



	- Design on the basis of studies carried out in Part A			
	c) Building System Integration			
	- Building Material and Assemblies			
	- Building Services Systems.			
AR 31002 AG	RO-ARCHITECTURE			
L=00 S=00 W=04	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	To study agro-related infrast	To study agro-related infrastructure		
Contents	Transforming the existing traditional agriculture or subsistence farming into modern, commercial and dynamic farming systems through infrastructure in the fields of agricultural economics, crop production, agricultural engineering and livestock production. Government Initiatives to strengthen infrastructure with respect to agricultural industry.			
	urban market setups, etc.	les like warehouses and storage facilities,	rurai - urban connectivity, rurai -	
	Concepts to study: urban farr	ning, vertical farming, edible landscape, a	gro-tourism, e <mark>tc</mark> .	
Method	The course is expected to provide the inputs required through lectures and discussions. To encourage enquiry and investigation into existing literature by the student to elaborate on contemporary issues and cases.			
AR 31003 PR	OFESSIONAL PRACTICE AND	ENTREPRENEURSHIPSKILLS		
L=02 S=00 W=02	CREDITS = 04 CONTACT HR <mark>S</mark> /WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Creating an awareness of the skill enhancement theory.	role & res <mark>ponsibilities of</mark> an architect. Lea	ndership quality and multitasking	
Contents	Role of an Architect, responsi Duties, powers and functions	bilities and liabilities with respect to clier of an Architect.	nt and the society.	
	Architects Act 1972- its aims, and regulations under the Ac	objectives, provisions for registration wi t)	th the Council of Architecture(Rules	
	Indian Institute of Architects	and its role in the field of architecture in l	indian context.	
	Professional work and scale of	of fees, mode of working and payments, p	phasing of projects etc.	
	Tendering, contracts and art site supervisor, contractor a	cicles of agreement, execution of contra and subcontractor etc.	act, appointment of clerk of works,	
	Understanding of Agreement	, Contract, Void contract, Breach of contra	ct etc.	
	Arbitration - settling of dispu Working. Role of an architect conditions extra items varia	tes through arbitration, the Arbitration A as an Arbitrator. Settling problems and d tion in work quality, insurance and compe	ct, procedures and method of isputes arising out of contract ensation of workers etc.	



	Understanding of terminology of PRICE-COST-VALUE, Purpose and importance of valuations, types of valuations, Valuation of properties - land and buildings, role of architects as approved valuers. Methods & Techniques for valuation. Architectural Competitions- need, procedures for conducting, rules and regulations etc. Office Management: Types of firms and legal implications. Accounts and Finance, procedures for loans. Maintaining office records. Office personnel and legal provisions regarding employees of small firms.	
Method	The course topics must be conducted as a mix of lectures/discussions, sample documents and formats with a number of assignments and exercises to impart the skills necessary for carrying out the need of legal aspect. explanation of various formalities from the competent firms, study of literature and methodology of various firms in the practice, etc.	
References	 Namavati Roshan -Professional Practice Code of Professional Conduct IIA Publication Codes of architecture by the Council of Architecture, New Delhi 	

AR 31004 RESEARCH METHODOLOGY - II

L=00 S=00 W=04	CREDITS = 04 CONTACT HRS/WK = 04INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100UNIVERSITY EXAMINATION (THEORY) = 00	
Focus	Research related to the thesis project should lead to in depth understanding of the requirements with design app <mark>li</mark> cability.	
Contents	Literature review from articles, book reviews and other sources on related topics to support the project viability. Primary surveys as case studies examining the existing projects and experiencing the challenges faced by stakeholders/users. The inferences and learning outcomes from the above shall further guide the final design translation from investigations done.	
Method	Step by step proceedings and periodic review of students work with the help of PowerPoint, graphical presentations on drawings sheets, and report writing at every stage.	
References	 Linda N. Groat, David Wang -Architectural Research Methods Elżbieta Danuta Niezabitowska-Research Methods and Techniques in Architecture Molly stock-A Guide to Graduate Research 	