

9/25/21

SARDAR PATEL UNIVERSITY
2-YEAR MASTER OF ARCHITECTURE PROGRAM
SCHEME OF TEACHING & EXAMINATION
 (EFFECTIVE FROM OCTOBER 2021 ONWARDS)

MASTER OF ARCHITECTURE—I															
SEMESTER - I						SEMESTER - II									
EXAMINATION						TEACHING									
SR. COURSE NO.	COURSE CODES	COURSE TITLE	EXAMINATION		DISTRIBUTION OF MARKS				MARKS		NO. OF HRS./WEEK				
			NO. OF PAPERS	DURATION IN HOURS	THEORY = 100 marks (50% passing marks) -SEPARATE PASSING IN BOTH THE HEADS	Int. Assessment (50% passing marks)	Ext. Utl. Exam (50% passing marks)	Int. Assessment (50% passing marks)	Ext. Utl. Exam (50% passing marks)	STUDIO /PRACTICAL /WORKSHOP = 100 marks	Credit (C)	TOTAL (M + C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/Seminar (1:1)
1	MARI01	Studio-I (Urban Habitat Design)	-	1	Jury/Viva	-	-	-	50	50	10	1000	0	8	2
2	MARI02	Theories of Humane habitats	1	-	2	50	-	-	-	-	3	300	2	0	1
3	MARI03	Principles of Sustainability and Building Design	1	-	2	50	-	-	-	-	6	600	3	0	3
4	MARI04	Urban Conservation and Regeneration	1	-	2	50	-	-	-	-	4	400	2	0	2
5	MARI05	Contemporary Architecture theory & practice	1	-	2	50	-	-	-	-	3	300	2	0	1
6	MARI06	Elective-I (Professional & Open)	-	-	Jury/Viva	-	-	-	100	-	3+1	400	1	0	3
											30	3000	10	8	12
															TOTAL 30 HRS/WEEK @1 CREDIT = 1HR.
SR. COURSE NO.	COURSE CODES	COURSE TITLE	EXAMINATION		DISTRIBUTION OF MARKS				MARKS		NO. OF HRS./WEEK				
			NO. OF PAPERS	DURATION IN HOURS	THEORY = 100 marks (50% passing marks) -SEPARATE PASSING IN BOTH THE HEADS	Int. Assessment (50% passing marks)	Ext. Utl. Exam (50% passing marks)	Int. Assessment (40% passing marks)	Ext. Utl. Exam (60% passing marks)	STUDIO /PRACTICAL /WORKSHOP = 100 marks	Credit (C)	TOTAL (M + C)	Theory (1:1)	Studio (1:1)	Workshop/ Practical/ Site Visit/Seminar (1:1)
1	MAR201	Studio-II (Green/Sustainable Design)	-	1	Jury/Viva	-	-	-	50	50	12	1200	0	9	3
2	MAR202	Ecological Site Planning and design development	1	-	2	50	-	-	-	-	3	300	2	0	1
3	MAR203	Advanced Building Materials and Construction Technology	1	-	2	50	-	-	-	-	4	400	2	0	2
4	MAR204	Climate Responsive Building Design, Performance and Evaluation	1	-	2	50	-	-	-	-	4	400	2	0	2
5	MAR205	Advanced building services and BIM	1	-	2	50	-	-	-	-	3	300	2	0	1
6	MAR206	Elective-II (Professional & Open)	-	-	Jury/Viva	-	-	-	100	-	4	400	1	0	3
											30	3000	9	9	12
															TOTAL 30 HRS/WEEK @1 CREDIT = 1HR.

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MASTER OF ARCHITECTURE—II														
SEMESTER – III						SEMESTER – IV								
EXAMINATION						EXAMINATION								
SR. COURSE NO.	COURSE CODES	COURSE TITLE	NO. OF PAPERS		DURATION IN HOURS	DISTRIBUTION OF MARKS				TOTAL (M + C)	NO. OF HRS. / WEEK			
			Theory	Studio/ Workshop		THEORY = 100 marks (50% passing marks) -SEPARATE PASSING IN BOTH THE HEADS	Int. Assessment (50% passing marks)	Ext. Utl. Exam (50% passing marks)	Int. Assessment (50% passing marks)		Ext. Utl. Exam (50% passing marks)	STUDIO/PRACTICAL /WORKSHOP = 100 marks	Credit (C)	Theory (1+1)
1	MAR301	Studio-III (High Tech Building Design)	-	1	Jury/Viva	-	-	-	50	50	14	0	11	3
2	MAR302	Building Finances & Resource Management	1	-	2	50	50	-	-	-	3	2	0	1
3	MAR303	Architectural Research Methods & Dissertation Formulation	-	1	Jury/Viva	-	-	-	50	50	6	2	0	4
4	MAR304	Legislations and Governance for Architectural Practice	1	-	2	50	50	-	-	-	3	2	0	1
5	MAR305	Elective-III(Professional & Open)	-	-	Jury/Viva	-	-	-	100	-	4	1	0	3
											30	7	11	12
											TOTAL 30 HRS/WEEK @1 CREDIT = 1HR.			
SEMESTER – IV														
SR. COURSE NO.	COURSE CODES	COURSE TITLE	NO. OF PAPERS		DURATION IN HOURS	DISTRIBUTION OF MARKS				TOTAL (M + C)	NO. OF HRS. / WEEK			
			Theory	Studio/ Workshop		THEORY = 100 marks (50% passing marks) -SEPARATE PASSING IN BOTH THE HEADS	Int. Assessment (40% passing marks)	Ext. Utl. Exam (50% passing marks)	Int. Assessment (40% passing marks)		Ext. Utl. Exam (50% passing marks)	STUDIO/PRACTICAL /WORKSHOP = 100 marks	Credit (C)	Theory (1+1)
1	MAR401	Dissertation (Thesis)	-	1	Jury/Viva	-	-	-	50	50	20	0	14	6
2	MAR402	Ethos of Architecture Profession	1	-	2	50	50	-	-	-	6	3	0	3
3	MAR403	Elective-IV	-	-	Jury/Viva	-	-	-	100	-	4	1	0	3
											30	4	14	12
											TOTAL 30 HRS/WEEK @1 CREDIT = 1HR.			

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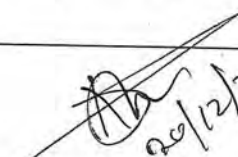
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Academic Regulations

1.0		ADMISSION :
	1.1	Admission Committee for Professional Courses(ACPC) and CAID Admission Committee shall decide / conduct the admissions to Master in Architecture (M.Arch.).
	1.2	Minimum qualification/requirement for admission to Master in Architecture (M.Arch): B.Arch./Diploma in Architecture (at par with Degree) approved by the Council of Architecture or its equivalent from a recognised University with minimum 50 % aggregate marks and PG CET conducted by ACPC.
	1.3	All candidates selected for admission shall pay fees as laid down by CAID from time to time & register for their studies by the 1st day of the Semester or the day designated & announced in advance, failing which their admission may be cancelled.
	1.4	No student shall be admitted to CAID unless he/she has signed the declaration in the prescribed format before joining.
2.0		DISCIPLINE:
	2.1	High Standard of Discipline is expected from all the students enrolled. Basic Guidelines of the Code of Conduct has been inducted in the Agreement signed by students & Parent/Guardian, at the time of Admission/ Registration.
	2.2	Any non-observance of the laid down norms will result in Disciplinary/Administrative action including expulsion from the program. Punitive measure will be based on the gravity of indiscipline done & line of action initiated as recommended by the Academic Committee of CAID.
3.0		REGISTRATION:
	3.1	Post graduate full time degree Program in Architecture shall have a minimum duration of 2 academic years or 4 semesters of approximately 18 working weeks duration.
	3.2	All students must register for M. Arch. Program in Semester I to cover 30 Credit. For all subsequent semesters, students must register for all courses offered in the Semester for which the student is eligible (Refer Teaching Scheme).
	3.3	One must have paid full fees for the Semester in order to be a bonafide student, and he/she must be registered for all subjects for which the student is eligible. Only bonafide students will be entitled to facilities on & off campus, concessions, introductions etc.
	3.4	A student is not permitted to continue after a break of more than 2 semester consecutively for purposes of work experience, travel or alternative studies, or for any other valid reason. A continuous break in studies beyond 02 semesters will mean that the student status is forfeited and the student is required to apply for readmission.
	3.5	A student may be denied Registration if he/she has been debarred or suspended from studies due to disciplinary action taken by the CAID or any other recognised Institute.

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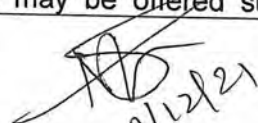
4.0	STAGE CLEARANCE :		
4.1	A student at any time, can carry a maximum of 08 credit backlog only except at Stage Clearance (see below). Students having more than 08 credits backlog shall not be permitted to register for any subsequent Semester till they have reduced the total backlog to less than 08 credits.		
4.2	FIRST STAGE CLEARANCE : For students to qualify for Registration to Second Year Master in Architecture Program, a student must have cleared 52 out of the 60 credits of First Two Semesters		
4.3	SECOND STAGE CLEARANCE : In order to qualify for Registration to the Thesis Semester, in Master in Architecture Course, the student should have cleared 86 out of the 90 credits		
4.4	Students in order to be eligible for the award of the Masters Degree should have cleared fully, all the credits (Core + Elective).		
	The details of Stage Clearance in the M.Arch program are summarised as under		
	SEMESTER (FROM)	PERMISSIBLE CREDIT BACKLOG	SEMESTER (TO)
	I SEMESTER	08 CREDITS	II SEMESTER
	II SEMESTER	08 CREDITS	III SEMESTER
	III SEMESTER	04 CREDITS	IV SEMESTER
5.0	ATTENDANCE :		
5.1	A student is expected to attend Studios, Workshops and Lectures regularly at all scheduled times. Minimum attendance requirement is 80% of the total classes held in a course. A student not having the required minimum attendance and a minimum 50 % internal assessment in any course shall be declared Non Eligible (NE) to take the University Examination in that particular course. The decision of CAID shall be treated as final in this matter.		
5.2	In the event of serious illness, a student may be permitted to have a minimum attendance of 60% of the total classes held in a course in consultation with the Principal/.		
5.3	Continuous absence without a valid reason for more than 6 weeks shall be deemed as discontinuation of that semester. If a student wishes to continue his/her studies at CAID, he/she may seek fresh Registration in the same semester in the next academic year.		
5.4			
5.5			
6.0	EVALUATION & EXAMINATIONS :		
6.1	All courses shall be evaluated by regular assessment of the Term Work periodically and end-term Written Examination/Jury or Viva. The following pattern shall be followed for Studio, Theory and Workshop / Seminar courses respectively.		
	STUDIO :		

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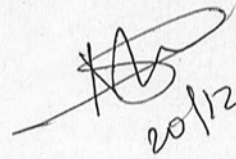
		<p>50 % - Periodic Assessment of Term Work by concerned faculty (including Time Problems during the semester). 50 % - End-term Jury/Viva evaluated by University.</p> <p>THEORY : 50 % - Continuing Assessment in the form of quizzes, term papers, assignments and/or mid-term examination. 50 % - End-term written University examination. University.</p> <p>WORKSHOP/SEMINAR/ELECTIVE : 50% Continuing Evaluation of Term Work/ Assignment/ Session presentation, etc. by concerned faculty. 50% End-term submission/report or viva or both by concerned Examiner.</p>						
	6.2	The minimum level for passing a course and obtaining credits is 45 % subject wise. The rules for condonation, promotion & passing will be as per the ordinances laid down by University.						
	6.3	For award of Class in the in Master of Architecture program (Semester I - IV), the following standards shall be applicable to the total marks. <table style="margin-left: 40px;"> <tr> <td>1. Distinction</td> <td>66% and above</td> </tr> <tr> <td>2. First Class</td> <td>60% -65.99%</td> </tr> <tr> <td>3. Second Class</td> <td>50% -59.99%</td> </tr> </table>	1. Distinction	66% and above	2. First Class	60% -65.99%	3. Second Class	50% -59.99%
1. Distinction	66% and above							
2. First Class	60% -65.99%							
3. Second Class	50% -59.99%							
	6.4	Exemption for head of passing 55% and above (applicable for repeat courses)						
	6.5	The 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, only in End Term written University examination.						
7.0		REPEAT EXAMINATION :						
	7.1	It is a student's responsibility to seek information / advice regarding a repeat examination and the credit backlog.						
	7.2	Students who have failed in any course in either Term work or Examination or both shall appear for the examination as and when conducted by the University. The Term work for that course must be done again before the Repeat Examination under the guidance by concerned faculty.						
8.0		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 coming from other University / Institute / College who has to obtain the remaining credits as per 4.5 may be offered such						

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		courses in the institution at the discretion of the Principal / Director of the School / College / Institution.
9.0		AWARD OF DEGREE :
	9.1	A student would be awarded the Degree of Master of Architecture by the S. P. University on the recommendation of the Senate of the University.

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M.Arch. -I			
SEMESTER I		TOTAL : SEMESTER CREDITS = 30	
MAR 101 STUDIO- I (URBAN HABITAT DESIGN)			
L=00 S=08 W=02	CREDITS = 10 CONTACT HRS/WK = 10	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY/VIVA) = 50
Focus	This studio aims at reading and understanding urban fabric of an existing habitat by understanding the determinants and causative forces responsible for the urban growth and change. Analysis of the resulting physical manifestation and development process to ignite sensitive and sustainable approach towards urban issues.		
Outcome:	Analyze heterogeneity of urban architecture and Design proposal to resolve complex design issues of Urban Habitat.		
Content	<p>Process: The studio shall involve detailed study and documentation of an existing Urban Fabric and suggestive interventions. Conducting surveys and other primary and secondary methods of data collection with respect to the selected study area which is recommended to the scale of a ward or neighbourhood. Documentation of the precinct with precisely addressing natural features such as climate, morphology, geology, as well as socio – economic and demographic features of the study area such as habitat management, human network and associated values. Analytical process leading to issue and challenge identification and conceptual level interventions to be designed with reference to the study.</p> <p>Rubrics: Study and documentation process may be carried out in groups while design interventions should be addressed individually. Interventions may address emerging social, environmental or economic issues of the urban areas. Design at micro level, with architectural and urban design measures, to be conveyed through appropriate to the scale drawings and model. Procedural framework to be explained with final adjoining report document written formally with plagiarism verification attached in the same.</p>		
Term work	Analysis and designing of urban neighborhood (habitat) based on primary study and documentation conducted.		
References	<ul style="list-style-type: none"> • Urban Transformation: Making cities inclusive, safe, resilient and sustainable- A.K.Jain • Designing for Human Behaviour-Jon Lang • Urban Design: A typology of Procedures-Jon Lang • Ephemeral Urbanism: Does permanence matter? -Rahul Mehrotra • Image of the City, Kevin Lynch • Invisible Cities , Italo Calvino • City Planning according to Artistic Principles, Camillo Sitte • City Form, Kevin Lynch • Urban Space and Squares, Rob Krier • Townscapes, Garden Cullen • Time-saver standards for Urban Design, Donald Watson • New Urban Housing , Hillary French • Changing the art of inhabitation, Smithson, Alison & Peter • Modern Housing Prototype, Sherwood, Roger 		

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- **Housing and Urbanization-** Charles Correa

MAR 102 THEORIES OF HUMANE HABITATS

L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
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Focus To address the relation between soio-cultural aspects and spatial structure of human habitat. To learn through historical determinants and enrich the contemporary dimensions of urban habitation.

Outcome Understanding global and Indian parameters essential for creating human-centric urban habitats.

Contents

UNIT I:

- Evolution of cities and human habitats. An overview at Global level with detailed learning of Indian Schema. (Case Studies/ Classification of towns)
- Understanding Urban Form and Morphology, its determinants and causative factors.

UNIT II:

- Hierarchies of Urban Form and Morphology with their relevant administrative and governance structure. Learning Administrative guidelines abiding Urban Area.
- Process of decision making and inception of built environment, key role players of process from policy development to infrastructural development

UNIT III:

- Urban Design and its vocabulary, Habitat design and its relation to architectural planning.
- Evolution and significance of space.

UNIT IV:

- Status of human being in built environment post Industrial Revolution.
- Human Behavioural Mapping various hierarchy of spaces in Urban Habitat
- Post occupancy evaluation
- Social Impact Assessment(SIA), Environmental Impact Assessment (EIA)

UNIT V:

- Study of approaches towards humanizing Urban Habitat such as walkable city, Mixed Land Use, Transit Oriented Development, Imageability of the city, Mental Mapping, Phenomenology Approach, CPTED

Term work May consist of assignments like:

1. Case study of Town/ City explaining its Morphology (timeline, physical pattern and changes and reasons for changes ; through graphical representation)
2. Exercise of survey based post occupancy evaluation and behavioural mapping of given urban habitat
3. Critical appraisal of various theories discussed in Unit V
4. Book Review / Article Review

References

- **The Kinetic City and other essays-**Rahul Mehrotra
- **Housing and Urbanization -**Charles Correa
- **Creating Architectural theory-**Jon T.Lang
- **Image of the City,** Kevin Lynch
- **City Planning according to Artistic Principles,** Camillo Sitte
- **Urban Design: A typology of Procedures and Products-**Jon T.Lang
- **City Form,** Kevin Lynch
- **Urban space,** Rob Krier

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- **The Concise Townscape** - Gordon Cullen
- **Time-saver standards for Urban Design**, Donald Watson
- **New Urban Housing** , Hillary French
- **Changing the art of inhabitation**, Smithson, Alison & Peter
- **Modern Housing Prototype**, Sherwood, Roger

MAR 103 PRINCIPLES OF SUSTAINABILITY AND BUILDING DESIGN

L=03 S=00 W=03	CREDITS = 06 CONTACT HRS/WK = 06	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
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Focus To apply sustainability principles in architecture at Urban Habitat level. Build knowledge background of various innovative techniques from vernacular to futuristic building design strategies.

Contents

UNIT I:

- Urbanisation and its challenges, Environmental and Energy crisis, Pollution, Global Warming, Heat Island Effect, Forest Fires, Food and Water Scarcity, Changing weather patterns etc.
- Present day scenario and participation of architecture and construction industry, causative factors
- Introduction to Ecology, Eco systems, Environment, Climatic Factors addressed at global and local level.

UNIT II:

- Climate, Climatic zones, Various theories and methods of depicting climatic zones, Global Zones, Main climatic zones of India.
- Architecture with relevance to various Indian Climatic Zones and periodic changes occurred to the architectural practices i.e. from Vernacular methods adapted during classical period, Pre Independence era, Post Independence era. Materials and construction techniques, space planning and space organisation methods.
- Interpretation of Climatic Data in Building Design and its implementation techniques

UNIT III:

- Sustainability and theory of sustainability, definitions, methods, history of sustainability,
- Global awareness programs, SDG s,
- Contribution and adaptation of Sustainable Goals in India and other parts of the world focus : legal and policy frameworks implemented

UNIT IV:

- Sustainable practices globally in Urban Built Environment
- Criteria of assessment and Green Rating Systems designed by various body to evaluate sustainability and energy efficiency of Urban Built Environment
- Role of GIS and Remote Sensing in sustainability assessments
- Concept of Sustainable Neighbourhood

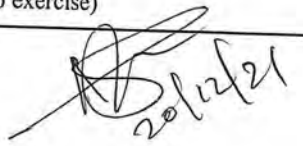
UNIT V:

- Building Regulations or by-laws in relation to sustainability
- Best Practices and Case Studies such as Masdar City at Abu Dhabi, Dongtan City at China, Curitiba at Brazil, South America,
- Best Practices by consultants and designers such as Arup Associates, etc.

Term work Suggestive exercises:

1. Article Review
2. International Case Study of Climate Oriented Building Code
3. Detailed study of building material and its environmental impact with scientific assessments such as u value, heat resistance, and implementation in various conditions to use as a sustainable material
4. Case Study of Sustainable City, its functionality, demographic, socio-economic and ecological parameters, financing measures etc.
5. Climate Responsive neighbourhood Design (as an extension of studio exercise)

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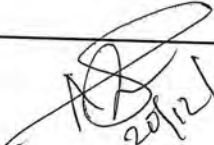
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References	<ul style="list-style-type: none"> • Climate and Architecture- Torben Dahl • Climatic Design- Donald Watson • Climate Adaptability of Buildings- Mitja Kosir • Responsive Architecture- Dusan Katunsky & Jeffrey Huang • Designing for a Disaster- Boyce Thompson • Climate Responsive Architecture , Arvind Krishan, Nick Baker, Simos Yannas, S.V. Zokole • Manual of Tropical Housing and Building , O.H. Koenigsberger, T.G.Ingersoll& other • Heating, Cooling, Lighting: Sustainable Design Methods for Architects, Norbert Lechner • Design with Climate : Bioclimatic Approach to Architectural Regionalism , Victor Olgyay • Sustainable Building Technology,K.S.Jagadish • Green Building Materials: A Guide to Product Selection and Specification , Ross Spiegel, Dru Meadows 		
MAR 104 URBAN CONSERVATION AND REGENERATION			
L=02 S=00 W=02	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	Identify need of Urban Conservation and Address methods of inclusive conservation techniques for Urban Habitat		
Outcome:	To develop an understanding of conservation, selection of conservation site, decision making about adaptive reuse in symbiotic relation to the context.		
Contents	<p>UNIT I:</p> <ul style="list-style-type: none"> • Definition of Heritage and Conservation, Need , Policy , Purpose, Charter • ICCROM, UNESCO , ASI,INTACH • Documentation and Conservation Process and Methods , listing of a heritage site and its significance • Guidelines for preservation, rehabilitation, adaptive re-use <p>UNIT II:</p> <ul style="list-style-type: none"> • Urban Conservation , its need and significance, Scope of Architectural Conservation and Urban Conservation • Overview of UNESCO World Heritage Listed cities in India • Inclusion of Heritage and Conservation norms in development regulations • Central and State Government Policies and Legislations. • Tourism development and conservation, a critical approach. <p>UNIT III:</p> <ul style="list-style-type: none"> • Regeneration , its scope and significance, • Urban Regeneration, Delineation of Historic Precincts, Up gradation • Urban Renewal and development strategies • Urban Conservation and Urban Recycling • Greenfield Development, Brownfield Development • Best Practices of Urban Regeneration and Urban Renewal <p>UNIT IV:</p> <ul style="list-style-type: none"> • Global policies for Heritage Protection • Gentrification , Community Participation, Economic Regeneration, • Management strategies and Financing measures • Government Schemes as AMRUT, HRIDAY etc. <p>UNIT V:</p>		

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	<ul style="list-style-type: none"> • Conservation and Sustainability • Urban Development and Urban Conservation • Imageability of the Urban Area
Term work	Suggestive exercises: 1. Article Review 2. International and National Case Study Urban Renewal and Regeneration 3. Reflection of By-laws for Heritage Protection , case based study 4. Documentation of Study area (Studio based exercise) ;Address Imageability criteria of study area (as an extension of studio exercise)
References	<ul style="list-style-type: none"> • Development and design of Heritage Sensitive Sites , Kenneth Williamson • Conservation Planning Shaping the Future ,F.LanceCraighead • Character of Towns, • The Conservation of European Cities, Donald Appleyard • A Richer Heritage: Historic Preservation in the Twenty- First Century, Robert E. Stipe • Conservation : A Technical Manual, Bernard M.Feilden , • Conservation of Historic Buildings ,Bernard M.Feilden • Urban Conservation ,Nahoum Cohen • Living Buildings: Architectural Conservation: Philosophy, Principles and Practice , Donald Insall • Historic Cities: Issues in Urban Conservation, JameMackee

MAR 105 CONTEMPORARY ARCHITECTURE : THEORY & PRACTICE (CONTEMPORARY DIRECTIONS IN ARCHITECTURE)

L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
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Focus To Identify the factors and process of gradual changes occurred throughout post Industrial history of Architecture from Technological, Socio-Economic and Element level perspective for Urban Form.

Contents	<p>UNIT I:</p> <ul style="list-style-type: none"> • Contemporary Narratives of Architecture. • Emergence of Contemporary styles, causes, impact on human life. Determinants of the urban form. <p>UNIT II:</p> <ul style="list-style-type: none"> • Overview of World Architecture post Industrial Revolution • Impact of Industrial Revolution on Architecture and Design • Theory of Beauty, Function and Isms, Deconstructionism, Brutalism, Post Modernism, etc • Contemporary architectural movements such as Bio mimicry, Organic Architecture, etc. <p>UNIT III:</p> <ul style="list-style-type: none"> • Globalisation and its effects on design decisions. New Materials, New Spaces, Global Structural Systems • Faceless Architecture • Futurism • Image ability and Historical Timeline of Urban Habitat <p>UNIT IV:</p> <ul style="list-style-type: none"> • Sustainable approach through historical development of Urban Habitat • Transportation system development , Urban Form, • Various Urban form Developments such as One Acre Town, Garden City etc. <p>UNIT V:</p>
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21/12/2021


20/12/21

SARDAR PATEL UNIVERSITY
2-YEAR MASTER OF ARCHITECTURE PROGRAM
COURSE CURRICULUM
(EFFECTIVE FROM OCTOBER 2021 ONWARDS)

	<ul style="list-style-type: none"> • Role of Artificial Intelligence in defining Urban Form and its characteristics • Reversal theory , Utopian Urban Form, Urban Forms of the Future • Future of the Urban Form as envisioned by thinkers of today's time. 						
Term Work	Suggestive assignments <ol style="list-style-type: none"> 1. Article Review 2. International and National Case Study 3. Critical appraisal of Theories related to Urban Form 						
References	<ul style="list-style-type: none"> • Programs and Manifestos of 20th Century Architecture, Ulrich Conrads, Michael Bullock • Constructing a New Agenda : Architectural Theory 1993-2009 , A. Krista Sykes, K. Michael Hays • Theorizing a New Agenda for Architecture : An Anthology of Architectural Theory 1965-1995 , Kate Nesbit • Architecture and Independence: The Search for identity-India 1880-1980 -Jon T. Lang • Architecture Theory since 1968 , K. Michael Hays • Complexity and Contradiction in Architecture, Robert Venturi • The New Paradigm in Architecture, Charles Jencks • The concise history of Indian Architecture-Jon Lang 						
MAR 106ELECTIVE I(PROFESSIONAL AND OPEN)							
L=01 S=00 W=03	<table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">CREDITS = 04</td> <td style="width: 33%;">INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100</td> <td style="width: 33%;">UNIVERSITY EXAMINATION = 00</td> </tr> <tr> <td colspan="3">CONTACT HRS/WK = 04</td> </tr> </table>	CREDITS = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION = 00	CONTACT HRS/WK = 04		
CREDITS = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION = 00					
CONTACT HRS/WK = 04							
Focus	Familiarizing the students with knowledge and increasing awareness on the set of topics and issues related to the field of architecture addressed in the ongoing semester.						
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 : <ol style="list-style-type: none"> 1. Alternative construction technology and materials 2. Pre-engineered structures 3. Revit 						

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M.Arch. FIRST YEAR: SEMESTER II			
SEMESTER II		TOTAL : SEMESTER CREDITS = 30	
MAR 201 STUDIO – II (GREEN AND SUSTAINABLE DESIGN)			
L=00 S=09 W=03	CREDITS = 12 CONTACT HRS/WK = 12	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50
Focus	To design buildings & their surroundings optimized with respect to sustainability, environmental & energy issues. Analysis of climate information & data in a way that conclude the design decisions		
Outcome:	To inculcate the design thinking approach with sustainability and environment specific architectural design as a default criteria.		
Contents	<p>PART I The first part of studio focus upon the analysis and data collection which helps students to design the sustainable building. Students are supposed to take inferences using Site analysis, climate data analysis. Climate responsive passive building design solutions. Defining the suitable comfort model and analysing climate data on basis of thermal indices, bio climatic chart, and psychometric process. Study of data and prescriptions given in NBC and ECBC for better thermal design of building.</p> <p>PART II The second part of studio aims is to design Sustainable campus design as a design project for its optimal solution. Design to achieve ecological solution and Aspects such as indoor air quality, human comfort, use of materials and energy, thermal energy of building envelope etc. will be the key focus of the studio along with sustainable land utilization and planning. The studio involves design of a sustainable building based on solar passive design principles. Studio project involves application of sustainable design principles, knowledge of sustainable building material to arrive at a climate responsive building which ensures human comfort conditions. Building energy simulation will be used as predictive tool for enhancing building performance and designing building envelope.</p> <p>PART III Report showing Building performance evaluation of design project. IGBC or GRIHA evaluation of project.</p>		

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References	<ul style="list-style-type: none"> • Climate and Architecture- Torben Dahl • Climatic Design- Donald Watson • Climate Adaptability of Buildings- Mitja Kosir • Responsive Architecture- Dusan Katunsky & Jeffrey Huang • Designing for a Disaster- Boyce Thompson • Architectural Theories of the Environment- Edited by Ariane Lourie Harrison • Architecture on the ethics of climate- Jin Baek • Sustainable Design- David Bergman • Introduction to Architectural Science: The basis of sustainable design by Steven V. Szokolay • Sun, Wind & Light : Architectural Design Strategies by Brown.G.Z. and Mark Dekay, • Energy Manual: Sustainable Architecture by Martin Zeumer, Tommy Stark, Manfred Hegger, Matthias Fuchs • Architecture and the Environment: Contemporary Green Buildings by Jones, David Lloyd • Green Architecture by James Wines • The New Net Zero: Leading-edge Design and Construction of Homes and Buildings for a Renewable Energy Future by William Maclay • Sustainable Design: A Critical Guide by David Bergman • Environmental Control Systems: Heating, Cooling, Lighting by Moore, Fuller 		
MAR 202 ECOLOGICAL SITE PLANNING AND DESIGN DEVELOPMENT			
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 discourse and design upon landscape history, ecology, landscape and theories, design techniques and procedures. Emphasis on the design of the built environment at the intersection of urbanization and ecology To advance in landscape design with critical, theoretical, representational, and technical skills through design		
Outcome	To implement site responsive design decision from concept development to construction strategies.		

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Contents	<p>UNIT I : HISTORY OF MAN AND LANDSCAPE A chronological narrative, which will place site-specific emphasis on a number of cognate disciplines (hydrology, forestry, geology, agronomy, geography, hunting, inter alia), in the context of endemic and transplanted visual and textual traditions</p> <p>UNIT II : LAND AND THE BUILT Landscape and its relation to climate, topography, drainage subsoil, vegetation, and their co-relation. Elements and Materials Landscape, their effect on visual and spatial organization in terms of environmental quality for human living.</p> <p>UNIT III : ECOLOGY AND TECHNIQUES Empirical observations and investigation to explore natural systems. Plant material and systems will be the key components of the study.</p> <p>UNIT IV : CITY AND THE LAND Contemporary theories of landscape as a medium of urbanism and product of urbanization. The topic surveys sites and subjects, texts and topics describing landscape's embeddedness in processes of urbanization as well as economic transformations informing the shape of the city; GREEN URBANISM</p> <p>UNIT V : CONSTRUCTING VISUAL NARRATIVES OF PLACE Representation of all the units in form of observation, reading and interpretation of the territory to communicate different visions of the final studio project.</p>		
Term work	Suggestive assignments 1. Article Review 2. International and National Case Study		
References	<ul style="list-style-type: none"> • Planting Handbook by Nick Robinson • Experiencing Architecture by Steen Eiler Rasmussen • Design with nature by Ian McHarg • Silent Spring by Rachel Carson • Afterlife of the gardens by John Dixon Hunt • The Image of the city by Kevin Lynch • Urban Ecology by Richard Forman • The landscape of man by Geoffrey Jellicoe and Susan Jellicoe • Form and fabric in landscape architecture by Catherine Dee • Envisioning Information by Edward Tufte • This Fissured Land by Madhav Gadgil and Ramachandra Guha 		
MAR 203 ADVANCED BUILDING MATERIALS AND CONSTRUCTION TECHNOLOGY			
L=02 S=00 W=02	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Aim	To develop awareness and understanding of construction of large span structures, high rise buildings, Pre-fabrication in building construction, Modular co-ordination, and advance building materials		

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Outcome	To build background information essential for site responsive, sustainable Infrastructure design and development.		
Contents	<p>UNIT I : LARGE SPAN STRUCTURES: Conceptual Understanding of various large span structures, like Geodesic domes, hyperbolic paraboloids, and free form shapes etc. used for Airports, Stadium, Industrial buildings, public spaces etc. Construction details, Service systems, Structural Systems, Sequence of erection and facilitating maintenance of such structures. Identify specialized equipment required for erection of such structures. Case studies of such structures and reporting.</p> <p>UNIT II: ADVACNED BUILDING MATERIALS: Study of advance building materials like Special alloys of steel & other metals, glass, polymer, fabric, Various types of finishes & treatments, Construction chemicals, specially manufactured items etc. and specialized equipment required for Installation and construction. Market survey and collection of information about the materials.</p> <p>UNIT III : UNDERSTANDING HIGH RISE BUILDINGS: Conceptual Understanding of High rise buildings in normal and adverse conditions considering topography of the site, water-logging, marine structures, etc., Construction details understanding, Service systems, Structural Systems, Sequence of erection and facilitating maintenance of such structures. Identify specialized equipment required for Installation of such structures. Case studies of such structures and reporting.</p> <p>UNIT IV : PRE-FABRICATION IN BUILDING CONSTRUCTION: Conceptual Understanding of Pre-fabrication in building construction. Concept of Modular co-ordination. Construction details understanding, Service systems, Structural Systems, Sequence of erection and facilitating maintenance of such structures. Essential process of manufacturing, handling of pre-fabricated components. Identify specialized equipment required for erection of such structures. Case studies of such structures and reporting.</p> <p>UNIT V : NEW EMERGING MATERIALS: Properties, Application specification and Standards (Indian and International) Teflon, Special Glasses, Aluminum composite Panel, cables and plastics , Polymers, Aerogels, etc., Nano Technology Applications in construction. Working Details and Case Studies.</p>		
Term work	<p>Suggestive assignments</p> <ol style="list-style-type: none"> 1. Article Review 2. International and National Case Study 		
References	<ul style="list-style-type: none"> • The art of structures by Aurelio Muttoni • The structural bases of architecture by Bjorn N. sandaker, Arne P. Eggan& Mark R. Cruvellier. • Shell Structures for Architecture: Form Finding and Optimization • Structure as Architecture: A Source Book for Architects and Structural Engineers by Andrew Charleson • Structure Mechanics for Architects by Harbhajan Singh • Designing tall buildings by Mark Sakisian • Skyscrapers by Judith Dupre • Materials for architects and builders by Arther Lyons • Material architecture by John Fernandez 		
MAR 204 CLIMATE RESPONSIVE BUILDING DESIGN, PERFORMANCE AND EVALUATION			
L=02 S=00 W=02	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50

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Focus	To develop a skill to calculate energy performance of building. To develop ability to take decision on materials required based on thermal performance. To model building performance using energy simulation software. To interpret simulation results and troubleshoot errors. To use measured building energy data to calibrate simulation model
Outcome	To focus on building performance mechanism and understand post occupancy analysis.
Contents	<p>UNIT I Introduction to building energy simulation Overview of building energy simulation and role of building simulation in design of Sustainable buildings. Comparison of available software and tools used for building energy Simulation. Understanding fundamental concept of simulation with heat balance equation and Heat loss form factor Understanding use of software for climatic data and analysis such as Climate Consultant, ClimaPlus. Knowledge of tools to aid building simulation Assembly U-Factor Calculator, Comfort And Weather Analysis, Multi-City Comfort And Weather Comparison, IMAC Assistant (India Model For Adaptive Thermal Comfort Tool Assistant), Heat Map Generator Tool, etc. Use of simulation in early design process to enhance performance of building energy codes.</p> <p>UNIT II Thermal and day lighting analysis of thermal envelope Working knowledge of software's for Shading and Massing Analysis of Architectural Forms, day lighting analysis of floor plates to optimize fenestration size ,shading devices and material performance ,thermal performance of envelope to optimize energy utilization index, Simulation for assessing ventilation performance and Use of simulation to predict performance of model for extreme seasons. Assignments to understand building simulation and Simulation of building envelope of studioproject to optimize form, material use, thermal performance and day lighting solutions. Use of free source ware for building performance analysis such as EDGE and other freeware.</p> <p>Software and tools</p> <ul style="list-style-type: none"> • Climate consultant • Open studio • Dialux pro • Sketchup • CARBSE tools • Eco tech ANALYSIS • Andrewmarsh.com
Term work	Suggestive assignments 1. Article Review 2. International and National Case Study
References	<ul style="list-style-type: none"> • Architecture from Prehistory to Climate Emergency- Barnabas Calder • Climate and Architecture- Torben Dahl • Climatic Design- Donald Watson • Climate Adaptability of Buildings- Mitja Kosir • Responsive Architecture- Dusan Katunsky & Jeffrey Huang • Designing for a Disaster- Boyce Thompson • Architectural Theories of the Environment- Edited by Ariane Lourie Harrison • Architecture on the ethics of climate- Jin Baek • Sustainable Design- David Bergman

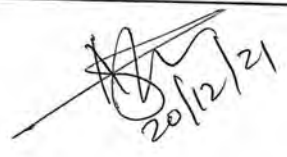
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MAR 205 ADVANCED BUILDING SERVICES AND BIM (BMS)			
L=02 S=00 W=02	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	To develop awareness and understanding of Advanced Building Services employed in various complex buildings and address environmental issues related to these services. This course aims to understand the integration of services in the sustainable design solutions.		
Outcome	To learn BIM as an essential tool of analysis and implementation in managing basic and advanced services in any building.		
Contents	<p>UNIT I : WATER SUPPLY & PLUMBING SYSTEMS IN HIGH RISE BUILDINGS: Water supply & Plumbing systems in high rise building complexes and complex structures: Procurement, demand and distribution of water in large complexes. Quality of water consideration for different uses. Systems and equipment used in Treatment of water for distribution, recycling and reuse and specialized equipment used for this purpose. Identify special needs for a building typology-development. Case studies of such structures and reporting. SKADA system.</p> <p>UNIT II : SANITATION AND WASTE DISPOSAL SYSTEMS IN HIGH RISE BUILDINGS Sanitation and Waste disposal systems in high rise building complexes and complex structures: Collection and disposal systems used in high rise buildings and complex structures. Effluent treatment plants and their efficiency, chemical properties of the treated effluent considering the source and end use. Concept of recycling and reuse of treated effluent. Rain water harvesting and similar methods of conserving water resources used in High rise Buildings. Disposal of treated effluent into natural sources of water. Storm/rain/surface water estimation, collection systems and disposal. "0" waste campus technology.</p> <p>UNIT III : MECHANICAL & COMMUNICATION SYSTEMS Mechanical & Communication systems (elevators, escalators, conveyors, etc.). Security systems etc. in high rise building complexes, public buildings, Parking lots and complex structures like Hospitals, public transport terminals etc. Design parameters for determining the loads & requirement, Operation and maintenance of these Services. Case studies of such structures and reporting.</p> <p>UNIT IV : ELECTRICAL AND TELECOMMUNICATION SYSTEMS Electrical and telecommunication systems in high rise building complexes public buildings, and complex structures like Hospitals, public transport terminals, IT complexes etc. Design parameters for determining the loads & requirement, Operation and maintenance of these Services. Case studies of such structures and reporting. Internet on think, parking and surveillance systems.</p> <p>UNIT V : LIGHTING, HEATING, VENTILATION & AIR CONDITIONING SYSTEMS Lighting, Heating, Ventilation & Air conditioning systems in high rise building complexes, public buildings, Parking lots and complex structures like Hospitals, public transport terminals etc. Design parameters for determining the loads & requirement, Operation and maintenance of these Services. Passive & active ways of control of heat, light, humidity etc. for comfort conditions. Introduction to simulation software to determine comfort conditions in various spaces. Case studies of such structures.</p> <p>UNIT VI : FIRE SAFETY IN BUILDINGS Various techniques that has to be installed during and after the construction of buildings in various typology of buildings- focus on high rise buildings. Wet risers, Sumps, Smoke detectors, Alarms, Sprinkler systems, Fire escape stairs, Fire resistant doors, Fire resistant rating of materials and Firefighting equipment etc. Contemporary practices in fire safety, norms and terms to be followed by the architects during the course of detailing, etc.,</p>		

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Term work	Suggestive assignments/Exercises:		
References	Urban Systems Design- Yoshiki Yamagata, Perry P.J Yang		
MAR 206 ELECTIVE-II			
L=01 S=00 W=01	CREDITS = 02 CONTACT HRS/WK = 02	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	Familiarizing the students with knowledge and increasing awareness on the set of topics and issues related to the field of architecture addressed in the ongoing semester.		
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. Sustainable recycled building materials 2. Digital Fabrication 3. Intelligent building systems		
Method	Portfolio and Project Submission		

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M.Arch. SECOND YEAR : SEMESTER III									
Semester-III		Total Credits:30							
MAR 301 STUDIO-III(HIGH TECH STRUCTURE & SERVICES ORIENTED)									
L=00 S=11 W=03	CREDITS = 14 CONTACT HRS/WK = 14	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50						
Focus	<p>Understanding and knowledge of structural systems and green envelopes of high rise and high tech buildings through case studies and literature review. To understand advantages and limitations of different structural systems in terms of sustainability, energy use and construction cost savings.</p> <p>Application of a comprehensive base of knowledge acquired for the practice of architecture with exploration of advanced construction technology & services needed to accomplish an architectural project along with application of Intelligent building design.</p>								
Contents	<p>PART I STUDY AND PROPOSITION STAGE In this part, focus would be on how to study and analyze/ understand a situation through appropriate processes based on the design project and context given. At the end of this, the nature of the problem and the nature of the solution would be arrived at.</p> <p>PART II DESIGN STAGE In this part, the aim is to project a solution from the process. The outcome will be a workable, ingenious, innovative solution of any scale based on the project. The emphasis would be on advanced services, innovative and advanced construction techniques.</p> <p>A building typology which could be designed efficiently with technological advantage along with the factors of energy and environment, space flexibility, cost-effectiveness, client comfort, working efficiency, safety, culture, and technology. The design should aim an Intelligent Building which would create an environment which take full advantage of the efficiency of the building's occupants, while at the same time enabling competent management of resources with the least possible life-time costs of hardware and facilities.</p> <p>The studio focus is on design of hi rise/ hi tech green buildings. The studio seeks to address extreme problems like challenging environmental situations or extreme solutions for common problems like responsive façade. Studio intends to provide solutions through the novel use of technology, materials, programs, aesthetics, and spatial organizations, challenge and its relationship with the natural and built environments. The objective of the studio is to design a high rise green building with hi tech sustainable solutions, intelligent energy efficient systems, building skin and advanced building services.</p> <p>Unit –I: Introduction to high-rise buildings and structural system Height analysis, plan shapes, grids and core design - Foundations and soil conditions - Construction sequencing, building skin and envelope - Design philosophy, form and stability , structural loading, Dead and Live load - Methods of Live load reduction – impact, gravity loading, construction loads, wind loading - Tensile structures in high-rise. UNIT – II: Behaviour of various high rise structural systems: Case Studies Factors affecting growth, height and structural form – High rise behaviour, rigid frames, braced forms, infilled frames, shear walls, coupled shear walls, wall frames, tubular, cores, outriggerbraced and hybrid mega systems. Case studies of structural systems</p>								
Term work	Suggestive assignments/Exercises:								
References	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Sr. No</th> <th style="text-align: left;">Name of Authors / Books / Publishers</th> <th style="text-align: left;">Year of publication reprint</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Renzo piano building workshop by peter Buchanan</td> <td>2001</td> </tr> </tbody> </table>			Sr. No	Name of Authors / Books / Publishers	Year of publication reprint	1.	Renzo piano building workshop by peter Buchanan	2001
Sr. No	Name of Authors / Books / Publishers	Year of publication reprint							
1.	Renzo piano building workshop by peter Buchanan	2001							

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	2. Structure, Space and Skin by Kenneth Powell 3. Details in architecture, all volumes 4. Portable architecture by Robert Kronenburg	2001	
MAR 302 FINANCE & RESOURCE MANAGEMENT			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	The course aims to provide a basic knowledge to carry out the financial feasibility of projects, selection of building systems and equipment's, evaluation of project investment decisions.		
Contents	<p>UNIT I Introduction to Building Economics: Meaning, Scope, Need and Significance of Study of building Economics. Inter-Dependence of Agriculture, Industrial and Economic Development. Factors influencing Location of development, Location Theory, Feasibility analysis. Location theory and feasibility analysis.</p> <p>UNIT II Factors affecting productivity and efficiency like Social and Cultural, Industrialization, Urbanization. Large, medium and small-scale development in Private Sector, Public Sector. Housing Policy of Indian Government. Economic Concept of Land, scope of Land Economics and its relevance in Building Industry.</p> <p>UNIT III Economic concept of Land: scope of land economics its relevance to building industry.</p> <p>UNIT IV Business Finance: Estimating the short-, medium- and long-term financial requirements. Financial Plan-Characteristics, Limitations. Sources of Finance: Private Sector, Public Sector, Co-operative Sector, Govt. Participation, and Foreign Sources.</p> <p>UNIT V Capital Market: Primary and Secondary Capital Market Players. Functioning & Critical Evaluation. Financial Services relating to raising of Capital: Loan policies of Banks, Private, Public & Government financial bodies. Project Appraisal</p>		
Term work	Suggestive assignments/Exercises:		
References	Financial Management –Theory and Practice By Prasanna Chandra Financial Management By I M Pandey Managerial Finance By J Fred Weston & Thomas E Copeland Fundamentals of Financial Management By Van Horne J C Prentice Hall Construction Management: Planning & Finance By Cormican D		
MAR 303 ARCHITECTURAL RESEARCH METHODS AND DISSERTATION FORMULATION			
L=02 S=00 W=02	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50

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Focus	To understand the types of research in various fields of social sciences, science and technology To study the methods employed in designing and conducting research To learn about scientific writing		
Outcome	To understand research practices and implement the background study essential for pre-research.		
Contents	<p>UNIT : I Introduction to Research and Research design – Fundamentals of research, types of research – Fundamental, Descriptive, Applied, Quantitative, Qualitative, Experimental, Exploratory etc., Selection and formulation of research problem, hypothesis and methodology.</p> <p>UNIT II Designing the research - Sampling and Scaling Techniques employed in qualitative and quantitative research Data Collection Methods and Techniques - Observation, questionnaire, interview, analysis of records, case study, etc.</p> <p>UNITY III Methods and Tools of Research – Quantitative and qualitative, Types of tests and inventories, observations, inquiry forms Statistical Techniques for Processing Data – Descriptive data analysis, Inferential data analysis, computer data analysis Presentation Techniques</p> <p>UNIT IV Scientific Report Writing – Writing proposals, papers, dissertations and thesis. Evaluating reports, scientific papers, and dissertations.</p>		
Term work	Suggestive assignments/Exercises:		
References	<ul style="list-style-type: none"> • Qualitative Data Analysis: A User-Friendly Guide for Social Scientists by Dey • Research Methodology: Methods and Techniques by Kothari, C.R. • Research Methods in the Social Sciences By Nachmias, C. F. and Nachmias, D • Handbook of Qualitative Research By Norman K Denzin and Yvonna S Lincoln 		
MAR 304 LEGISLATIONS AND GOVERNANCE FOR ARCHITECTURAL PRACTICE:			
L=02 S=00 W=01	CREDITS = 03 CONTACT HRS/WK = 03	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	After successful completion of this course, student should be able to: Develop an awareness Significance and Architect's role in profession. Acquaint with relevant Acts & Laws and general Management of Architectural Practice.		
Outcome	To study the Governance system and Legislative system essentially encompassing field of the profession.		

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Contents	<p>UNIT I An overview of the Town Planning Acts of Urban Development ministry of States & Central Government. The rules and regulations for Development Control and the principles behind the framing of these. Regional Plan, Development Plans, at State, District, Urban agglomeration, Municipal Corporations & Councils, Improvement trusts & Regional Development Authorities, CRZs, etc. Procedures for formulations, Implementation and applying for approvals at various levels.</p> <p>UNIT II Architects office and office Management. Interaction with the consultants. Design Management Issues. Role & Duties of Architect as an Employer or Employee. International Architectural practice and role of Various Statutory / Regulatory bodies in licensing like RIBA, AIA, etc</p> <p>UNIT III Regulations, Conditions and requirements of qualification, equivalence etc. for International practice in countries other than India like: USA, UK, Europe, Gulf countries, Asian countries</p> <p>UNIT IV An overview of various Acts relevant to the Architectural profession: Taxation laws like IT, Service Tax, etc.</p> <p>UNIT V An overview of various Acts relevant to the Architectural profession: like Indian Contract Act, Environment related laws, etc</p>		
Term work	Suggestive assignments/Exercises:		
References			
MAR 305 ELECTIVE-III			
L=01 S=00 W=03	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	Familiarizing the students with knowledge and increasing awareness on the set of topics and issues related to the field of architecture addressed in the ongoing semester.		
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. Futuristic architecture 2. Sky Scrapper architecture 3. Grass Hopper		
Method	Portfolio and Project Submission		

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M.Arch. SECOND YEAR : SEMESTER IV			
MAR 401 DISSERTATION			
L=00 S=14 W=10	CREDITS = 24 CONTACT HRS/WK = 24	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (JURY) = 50
Focus	An opportunity to demonstrate the gained necessary skills and the knowledge in order to organize and conduct a research and design project.		
Contents	<p>The dissertations/ thesis project is to be successfully done by each student on a topic of his / her choice selected and approved by faculty during the previous semester as part of course requirement of subject dissertation. Thrust area of work may include Architectural design, non-conventional construction system large span structures. hi-tech architecture Public facilities urban design Sustainable architecture. Building system design, landscape design. Detailing in design etc.</p> <p>The projects can be of any scale and size as long as the required rigor and depth is demonstrated by the student to merit consideration as a final project</p> <p>The project development will involve the aspects of structural systems, construction technologies, building services, detailing and materials along with design considerations to develop a comprehensive project proposal.</p>		
	<p>Stages of Development and Evaluation of Termwork</p> <ol style="list-style-type: none"> 1) Pre project: Dissertation 2) Abstract and Introduction 3) Scope and focus of project. 4) User activity study 5) Case study 6) Formulation of design brief 7) Site studies and guidelines 8) Conceptual development 9) Final design solution 		
MAR 402 ETHOS OF PROFESSIONAL PRACTICE			
L=03 S=00 W=01	CREDITS = 04 CONTACT HRS/WK = 04	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 50	UNIVERSITY EXAMINATION (THEORY) = 50
Focus	To familiarize students with the various legal systems that are in force and the methods of handling disputes. The student will understand the role and responsibility and the ethical standards that govern an architectural practice		
Contents	<p>UNIT I : IMPORTANCE OF ETHICS (ADR) Importance of Ethics in Architectural practice and Profession.</p> <p>UNIT II : APPOINTMENT OF ARBITRATORS - THEIR ROLES AND RESPONSIBILITIES How Arbitration proceedings are initialed - Reasons leading to Arbitration - Procedures and Communication - Composition of Arbitral Tribunal - Appointment of Arbitration and umpire – Interim Measures by Court / Arbitral Tribunal - Jurisdiction of Arbitral Tribunal - Conduct of Arbitral proceedings - Determination of Rules and procedure Place and language of proceedings - Claim statements and counter claim - Hearings and written proceedings - Experts and Assistance from courts - Form and contents of Arbitral Awards – Setting aside the Arbitral awards - Appeals, insolvency and Limitation - Misconduct of Arbitrator.</p> <p>UNIT III: TENDERING AND CONTRACTING Types of Contract, Comparative analysis of various types Tenders and process of tendering</p>		

S. Chakr.
22/12/2021

[Signature]
20/12/21

SARDAR PATEL UNIVERSITY

2- YEAR MASTER OF ARCHITECTURE PROGRAM

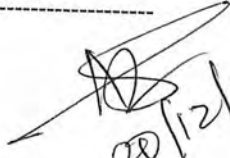
COURSE CURRICULUM

(EFFECTIVE FROM OCTOBER 2021 ONWARDS)

	UNIT IV : PROJECT MANAGEMENT CONSULTANCY Introduction - practices and strategic issues related to construction project management-understanding of issues related to management of clients and other stakeholders involved in the delivery of a project.		
	UNIT V : PRACTICE AND CASE-STUDIES Emerging trends in Arbitration in India through Cases – Landmark awards and judgements by the various courts and judiciary - Case Studies in Project Management Consultancy.		
Term work	Suggestive assignments/Exercises:		
References	<ul style="list-style-type: none"> • Futuristic: Visions of Future Living-Caroline Klein • Buildings for Tomorrow- Paul Cattermole • Thinking Architecture-Peter Zumthor • Atmospheres: Architectural Environments, Surrounding Objects-Peter Zumthor 		
MAR 403 ELECTIVE-IV			
L=01 S=00 W=05	CREDITS = 06 CONTACT HRS/WK = 06	INTERNAL ASSESSMENT (T.W./PERIODIC REVIEW) = 100	UNIVERSITY EXAMINATION (THEORY) = 00
Focus	Familiarizing the students with knowledge and increasing awareness on the set of topics and issues related to the field of architecture addressed in the ongoing semester.		
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 : Disaster management planning and mitigation Traffic management through architecture		
Method	Portfolio and Project Submission		

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S. Chakr
21/12/2021


20/12/21