



SCHOOL OF ARCHITECTURE AND PLANNING

Master of Architecture (General)

Programme Code: SAP0101

Duration- 2 Years Full Time

**PROGRAM STRUCTURE
AND
CURRICULUM & SCHEME OF EXAMINATION
2018-19**

1.1 Vision, Mission and Core Values of the University

Vision of the University

To serve the society by being a global University of higher learning in pursuit of academic excellence, innovation and nurturing entrepreneurship.

Mission of the University

- 1. Transformative educational experience**
- 2. Enrichment by educational initiatives that encourage global outlook**
- 3. Develop research, support disruptive innovations and accelerate entrepreneurship**
- 4. Seeking beyond boundaries**

Core Values

- Integrity**
- Leadership**
- Diversity**
- Community**

1.2 Vision and Mission of the School

Vision of the School

To be amongst the top institutes in India imparting quality education and professional skills to the students to emerge as architects of global caliber and thus the society in large.

Mission of the School

1. To create and sustain a stimulating and responsive academic inclusive environment.
2. To regularly enhance the teaching contents & techniques in keeping with current and future trends.
3. To provide a competitive and career oriented programme.
4. To encourage students to be socially responsive and responsible architects.

Core Values

- Critical Thinking and Observation
- Analytical Skills
- Creativity
- Integrity to uphold authentic building traditions and architecture principles

1.3 Programme Educational Objectives (PEO)

- PEO1 : To equip the students with the basic knowledge about the evolution of architecture as a distinct body of knowledge.
- PEO2 : To sensitize the students about the specialized components within the field of architecture that are required to be integrated for a successful professional practice.
- PEO3 : To familiarize the students with various levels of complexities of architectural design .
- PEO4 : To ensure awareness amongst the students regarding architectural design as a functions of natural & cultural context.
- PEO5 : To ensure familiarity amongst students about the current techniques and their validity related to good architecture
- PEO6 : To strengthen entrepreneurial and innovation culture among students.

1.3.3 Program Outcomes (PO's)

- PO1: Architectural Knowledge
- PO2: Critical thinking and Analysis
- PO3: Problem solving and Design Development Skills
- PO4: Communication and Display
- PO5: Environment and sustainability
- PO6: Professional Ethics

SCHOOL OF ARCHITECTURE AND PLANNING

Program: MASTER OF ARCHITECTURE (General)

TERM : I

S.No.	Subject Code	Subjects	L	T	P	Credits	Remarks	
Jury Subjects								
1	MAR 101	Design Studio – I	4	-	8	8	Old	
2	MAR 102	Urban Design	2	-	2	3	Old	
Theory Subjects								
3	MAR 103	Contemporary Architecture Trends & Theories	1	-	2	2	Old	
4	MAR 111	Research Techniques In Architecture & Planning	2	-	-	2	Old	
5	MAR 121	Low Cost Building Design & Techniques	2	-	-	3	New	
6	MAR 106	Architecture Conservation	2	-	-	2	Elective- 1	Old
7	MAR 119	Theory Of Architecture Education					Elective- 2	New
8	MAR 120	Theory Of Landscape Architecture					Elective- 3	New
Total Credits						20		

SCHOOL OF ARCHITECTURE AND PLANNING

Program: MASTER OF ARCHITECTURE (General)

TERM : II

S.No.	Subject Code	Subjects	L	T	P	Credits	Remarks		
Practical									
1	MAR 122	Design Studio- 2	2	2	12	10	New		
2	MAR 109	Advanced Building Construction Techniques	1	-	2	2	New		
Theory									
3	MAR 123	Advanced Building Services - I	1	1	2	2	New		
4	MAR 118	Mass Housing Design Strategies And Standards	2	-	-	2	New		
5	MAR 115	Construction Project Management	1	1	2	2	New		
6	MAR 113	Elective-1 Vernacular Architecture	1	1	-	2	Elective- 1	New	
7	MAR 114	Elective- 2 Futuristic Architecture					Elective- 2	New	
Total Credits							20		

SCHOOL OF ARCHITECTURE AND PLANNING

Program: MASTER OF ARCHITECTURE (General)

TERM : III

S.No.	Subject Code	Subjects	L	T	P	Credits	Remarks
JURY SUBJECTS							
1	MAR 201	Design Studio -3	2	-	12	8	OLD
2	MAR 205	Dissertation	1	2	-	2	OLD
3	MAR 203	Architectural Evaluation & Documentation	2	1	-	2	
THEORY SUBJECTS							
4	MAR 202	Resource Conserving Architecture	2	1	1	3	OLD
5	MAR 204	Advanced Building Services - II	2	1	1	3	OLD
6	MAR 206	Elective -1 Traffic & Transport Design	2	1	-	3	OLD
7	MAR 207	Elective -2 Infrastructure Services					
Total Credits						21	

SCHOOL OF ARCHITECTURE AND PLANNING

Program: MASTER OF ARCHITECTURE (General)

TERM : IV

S.No.	Subject Code	Subjects	L	T	P	Credits	Remarks	
PRACTICAL								
1	MAR 208	Architectural Design Thesis	4	-	20	14	OLD	
THEORY								
2	MAR 209	Legislation, Policies & Arch. Practice	2	1	-	2	OLD	
3	MAR 210	Elective-1 Finance & Economics In Building Industry	2	1	-	2	Elective-1	OLD
4	MAR 211	Elective-2 High Rise Buildings					Elective - 2	OLD
TotalCredits						18		

SEMESTER 1

MAR 101- Design Studio-1

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester:1
1	Course Code	MAR 101
2	Course Title	Design Studio-1
3	Credits	8
4	Contact Hours (L-P-S)	4-0-8
	Course Status	Compulsory
5	Course Objective	<ul style="list-style-type: none"> • Exploring and designing for city level • Understanding the language of city spaces, plazas, etc in architectural design • Learn about the different elements of urban design
6	Course Outcomes	<p>CO1: students should develop skills of drawing and representation</p> <p>CO2: to assimilate learning of graphics, construction, structures and computers to apply to basic design.</p> <p>CO3: Explore creative processes and idea generation and demonstrate critical evaluation of these processes in their projects.</p> <p>CO4: Appraise how design can impact, interact with, and improve environments.</p> <p>CO5: Understand spaces with three-dimensional visualization through the use of block models and appropriate softwares.</p>
7	Course Description	Architectural Design Project of a large magnitude in one of or similar categories of building typology emphasizing on need of Advance construction techniques and using modular co-ordination, pre-fabricated elements and technology.
8	Outline syllabus	
	Unit 1	Design Problem
	A	Introduction to Project
	B	Form and material based investigation
	C	Understanding spatial aspects based on activity, space, form and human scale
	Unit 2	Literature & Case Study
	A	Pre design study-Case study
	B	Pre design study -Literature Study, Site Analysis.
	C	Functional standards.
	Unit 3	Concept Development
	A	Concept formulation and idea investigation
	B	Preparation of design requirements, area requirements based on

		standards and their interrelation and circulation patterns.		
	C	Concept Formulation, Bubble Diagram and activity zoning.		
	Unit 4	Design Development		
	A	Design development- site development		
	B	Design development- floor Plans		
	C	Design development- sections and elevations		
	Unit 5	Design Presentation		
	A	Design sheets presentation		
	B	Model making on appropriate scale		
	C	Final portfolio submission		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		50%	0%	50%
	Text book/s*			
	Other References			

MAR 102: URBAN DESIGN

School: SUSAP		Batch : 2018-2020
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 1
1	Course Code	MAR 102
2	Course Title	Urban Design
3	Credits	3
4	Contact Hours (L-P-S)	2-0-2
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to: <ul style="list-style-type: none"> • Acquire a comprehensive base of knowledge required for the practice of architecture. • Develop awareness in physical context about implications of limited sources in design decision making.
6	Course Outcomes	CO1: To relate to the Mass housing issues the contribution of architects CO2: To analyse the various policies and enablement strategies in the context of Mass housing CO3: To classify and distinguish the issues pertaining to different Housing Typologies CO4: To summarise the problems and issues and identify possible solutions for different typologies
7	Course Description	Mass Housing Project of a large magnitude in one of the categories or a similar development typology below: <ul style="list-style-type: none"> • Higher income group or combinations of income groups in Urban areas. • Slum Improvement schemes by Government or private organizations • Housing project for Old Age people • Rehabilitation / transit accommodation /camps for people affected by natural • disasters like earthquake, floods, refugees, or other disasters.

		<ul style="list-style-type: none"> An in-depth research and analysis of activities below to evaluate the progress
8	Outline syllabus	
	Unit 1	Introduction to Design Problem
	1a	Evolving design brief for project
	1b	Need identification of project.
	1c	Demand of the project considering socio-economic conditions
	Unit 2	Site Survey and analysis.
	2a	Physiographical , Morphological and Geographical analysis
	2b	Local conditions and site surroundings
	2c	Climatic conditions
	Unit 3	Development Control & Guidelines
	3a	Special design considerations for the user
	3b	Development control legislations
	3c	Amenities for the residential development
	Unit 4	Case study and design development
	4a	Visual Survey of the site / project area
	4b	Urban center / housing project/rehabilitation/ transit accommodation/ Camps affected by natural disasters
	4c	Design philosophy
	Unit 5	Activity programme and design implementation
	5a	Impact of the development on adjacent neighborhood
	5b	Deriving typical modules for dwelling types
	5c	Architectural Design project with drawings and final presentation.

	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	<ul style="list-style-type: none"> • Planning and Architecture, Edited by Dennis Sharp Editor • Planning feasible learning places By Leggett S Bru Baker C. W. & Cohodes A. • Methods in Architecture, by : Town Health 		
	Other References			

MAR 103 : CONTEMPORARY ARCHITECTURE TRENDS & THEORIES

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year:2018-19
Branch: General		Semester: 1
1	Course Code	MAR 103
2	Course Title	CONTEMPORARY ARCHITECTURE TRENDS & THEORIES
3	Credits	2
4	Contact Hours (L-P-S)	2-0-0
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to: <ul style="list-style-type: none"> • Develop an awareness of the reasons for contemporary architectural theories. • Acquire an in depth knowledge of contemporary architectural trends , study the works of architects practicing in definable style of contemporary architecture
6	Course Outcomes	CO1: Identify Architectural trends within specified context CO2 : Illustrate the influencing factors in contemporary architecture CO3 : Explain the digital technologies and applications CO4 : Analyze the application and impact related to sustainability in environment CO5 : Hypothesize the examples of modern structures in the 20 th century.
7	Course Description	
8	Outline syllabus	
	Unit 1	Evolution of Architectural trends
	1a	Formal and the informal built-form
	1b	Manifestations and significant theories
	1c	Styles as classified later in history
	Unit 2	Influencing factors in contemporary architecture

	2a	Modern structures of 20 th century , analysis and influence		
	2b	Advances in Construction Technology		
	2c	New materials of construction		
	Unit 3	Influencing factors in the shaping of contemporary architecture		
	3a	Advances in Digital Technology		
	3b	Use of digital technology in visualization		
	3c	Simulation and application techniques		
	Unit 4	Analysis of contemporary design		
	4a	Awareness and application of sustainability		
	4b	Impact on environment.		
	4c	Architectural expression		
	Unit 5	Analysis of contemporary design		
	5a	English Bond, Flemish Bond (Single and Double)&Analysis of contemporary design – study of examples of modern structures of 20 th century and analysis of the influences with respect to - awareness and application of sustainability and impact on environment.		
	5b	Analysis of contemporary design – study of examples of modern structures in this period and analyse the influences with respect to – Architectural expression influenced by vernacular and regional Architecture.		
	5c	Analysis of contemporary design –study of examples of modern structures and analyze the influences with respect to –Architectural expression influenced by world as a global village		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*	The language of post modern Architecture, by Charles		
	Other References			

MAR 121: LOW COST BUILDING DESIGN AND TECHNIQUE

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: - General		Semester: 1
1	Course Code	MAR 121
2	Course Title	LOW COST BUILDING DESIGN AND TECHNIQUE
3	Credits	3
4	Contact Hours (L-T-P)	2-0-2
	Course Status	Core
5	Course Objective	After successful completion of this course, student should be: <ul style="list-style-type: none"> ● Conversant with various design low cost design systems. ● In-depth knowledge of various building materials, construction and execution techniques for designing low cost buildings
6	Course Outcomes	CO1: Understanding the importance of low cost housing techniques, defining the related terms, methods and processes. CO2 : Develop a thorough understanding of the various low cost housing systems. Describing the ways low-cost housing can impact the housing crisis in the country. CO3 : Illustrating the role of materials, techniques through data and design solutions. CO4 : Develop an ability to effectively examine and communicate knowledge in a report/design or any effective medium. CO5 : Formulate the study and the inputs based on research findings. CO6 : Compare the findings, assess the research as per the comments and discussions and finally submitting a complete research report/design.
7	Course Description	<ul style="list-style-type: none"> ● The aim of the subject is to introduce students to various aspects of Low Cost building design systems and ● techniques which can play a role in decreasing the cost of construction as well as the ● role of building material reflecting the architectural character of the region/ area.

Outline syllabus		
Unit 1	Introduction to Low Cost Building Techniques	
	1a. Basic introduction 1b. Understanding the importance of low cost building techniques 1c. Uses of low cost building techniques	
Unit 2	Understanding the elements/components	
	2a. Understanding the Structural System & and its components and their influencing costs 2b. Learning modern building techniques 2c. How Low Cost Techniques and Initiatives can help Housing in India	
Unit 3	Role of local building materials	
	3a. Identification of Local Building material 3b. Analysis of Native building techniques 3c. Application of Local Material to contemporary architecture	
Unit 4	Role of Design	
	4a. Modular coordination in building design, prefabrication- total and partial, impact of prefabrication on employment. 4b. Building construction detailing for cost reduction 4c. Building cost control techniques, research and development by various organizations in the country and foreign countries to reduce the cost.	
Unit 5	Importance of Building Management	
	5a. Understanding the Importance of Project Management 5b. Techniques of PERT & CPM 5c. Learning modern techniques of Building Management & Integration	
Mode of examination	Theory	
Weightage Distribution	CA	MTE
	30%	20%
Textbooks		
Other References	<ul style="list-style-type: none"> • RB1: Davis, S., “Architecture of Affordable Housing”, University of California Press. , 1995 	

	<ul style="list-style-type: none">• RB 2 : Ruiz, F.P., “Building an Affordable House”, Taunton Press. , 2005• RB 3 : Nunan, J., “The Complete Guide to Alternative Home Building Materials and Methods”, Atlantic Publishing., 1980• RB 4 : Lal, A.K., “A Handbook of Low Cost Housing ”, New Age International. , 1995• RB 5 : Mathur, G.C., “Low Cost Housing in Developing Countries”, South Asia Book. , 1999• RB 6 : Housing”, Juta Academic. , 1998Sowman, M. and Urquhart, P., “A Place called Home: Environmental Issues and Low-Cost
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MAR 106 : ARCHITECTURAL CONSERVATION

School: SAP		Batch : 2018-2020
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 1
1	Course Code	MAR 106
2	Course Title	ARCHITECTURAL CONSERVATION
3	Credits	2
4	Contact Hours (L-P-S)	2-0-0
Course Status		ELECTIVE- 1
5	Course Objective	<ol style="list-style-type: none"> 1. To introduce the students to the subject of Architectural Conservation and the role of conservation architects and the importance in need of conservation. 2. Introduction to the reasons and causes of decay of heritage buildings and settlements. 3. Introduction to the procedure of conservation, listing, typology, methodology and the various legislations and charters applicable on conservation projects. 4. To understand the role of various specialists and professionals in the process of conservation. 5. Undertake a case study or a appraisal of conservation projects to understand the above.
6	Course Outcomes	<p>CO1: To recognize the need of architectural conservation and identify the role of conservation architect.</p> <p>CO2: To identify the reasons of decay of heritage building and settlements.</p> <p>CO3: To prepare a detailed procedure which need to be followed for conservation of building and suggest intervention for up gradation of heritage settlements, in context to various legislations and charters.</p> <p>CO4: To explain and identify the need of specialists and various professional to be incorporated and conservation projects.</p> <p>CO5 : To recommend after a thorough assessments and suggest a comprehensive conservation plan for the heritage project.</p>

7	Course Description	The course is designed such that the students understand the need for conservation of heritage and other building of importance and understand the role of conservation architects. The students must understand the various factors which are responsible for the decay of the ancient building and settlements. The students needs to know the various typology in architectural conservation and the methodology required to take up the conservation projects.They should also be taught the method of preparing inventories and inspections, documentations,d egree of interventions, prevention of detoriation, consolidation of the fabric, restoration, rehabilitation, reconstruction, reproduction and analysis & recommendation for structural issues. The students need to understand the role of various specialists & other professionals in conservation projects. The knowledge of various legislation and charters applicable on the construction projects should be taught to the students. The entire process of conservation should be taught with the help of case study and appraisals of conservation projects.
8	Outline syllabus	
	Unit 1	Introduction to Architectural Conservation
	1a	Introduction to architectural conservation of buildings of importance
	1b	Definition & nature
	1c	Purpose and scope of conservation
	Unit 2	Philosophy in Architectural Conservation
	2a	Values in Conservation
	2b	Ethics of conservation
	2c	Building conservation legislation
	Unit 3	Conservation philosophy, principles and practice
	3a	Values in Conservation
	3b	Ethics of conservation
	3c	Building conservation legislation etc.
	Unit 4	Module 4 : Conservation techniques

4a	Preparatory procedure for conservation :Inventories, inspection, documentation; degree of intervention for prevention of deterioration, prevention of existing state, consolidation of the fabric, restoration, rehabilitation, reproduction, reconstruction etc.		
4b	Structural aspects of building to study structural elements such as beams, arches and domes; thumbs and walls, piers and columns, foundation etc. Causes of decay in buildings by natural and human factors, Disasters, Botanical, Biological and Microbiological		
4c	Conservation procedure - the work of conservation Architect and his team of coworkers: inspection documentation and reports, Research, analysis, Preventive maintenance, fire and security, cost control, special skills in arts and crafts.		
Unit 5	Conservation case studies		
5a	Case study 1 - of conservation project of a medium size project		
5b	Case study 2		
5c	Appraisal study and inferences		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	RB1:An introduction to conservation, by Feildon B. M., UNESCO Paris RB2:Conservation of Building by I. H. Harvey. RB3:A critical bibliography of Building Conservation, By Smith I. H.		
Other References			

MAR 111 : RESEARCH TECHNIQUES IN ARCHITECTURE & PLANNING

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester:1
1	Course Code	MAR 111
2	Course Title	Research Techniques in Architecture and Planning
3	Credits	2
4	Contact Hours (L-P-S)	2-0-0
	Course Status	Compulsory
5	Course Objective	The idea behind this module is to learn various research techniques, the analysis and the presentation of the same.
6	Course Outcomes	CO1: To understand importance of research in architecture and the theoretical and practical significance of research, types of research in process of formulating a research plan, various methods of research, their applications, data and simple statistical analysis, interpret and infer from the data. CO2: To understand methods of technical writing and presenting a research report.
7	Course Description	Architectural Design Project of a large magnitude in one of or similar categories of building typology emphasizing on need of Advance construction techniques and using modular co-ordination, pre-fabricated elements and technology.
8	Outline syllabus	
	Unit 1	Introduction to Research
	A	Meaning of research
	B	Significance of research in architecture.
	C	Relationship between design and research
	Unit 2	Module 2: Research Design
	A	Components of research
	B	Methods and analysis of data collection
	C	Preparing time schedule and budget of a research plan
	Unit 3	Module 3: Literature Study and Research
	A	Listing different sources of information
	B	Referencing and documenting
	C	Methods of Research in Architecture: Interview Techniques, Visual Techniques
	Unit 4	Module 4: Analysis and statistics
	A	Introduction to the Statistics: Introduction to the simple statistical methods of analyzing numerical data, statistical data analysis
	B	Presentation of the Data: Techniques of presenting the numerical data – graphical
	C	Content Analysis, Data Documentation and Analysis.

Unit 5	Module 5: Reporting the Research		
A	Understanding different sections of a research report		
B	Technical writing and language		
C	Formatting of a report		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30 %	20 %	50 %
Text book/s*			
Other References	<p>RB1: The Practice of Social Research, by Babbie, E. 3rd Ed.,1983 Belmont :Wadsworth Publishing Co..</p> <p>RB2: Research Design: Qualitative, quantitative and mixed methods approaches By Creswell, J. W., 2nd Ed, 2003.Thousand Oaks: Sage</p> <p>RB3: Research Design: Qualitative & Quantitative Approaches, 1994 Thousand Oaks : Sage</p> <p>RB4: Surveys in Social Research, Jaipur, By De Vaus, D. A, 2003, Rawat Publications</p> <p>RB5: Qualitative Data Analysis: A User Friendly Guide for Social Scientists, By Dey, I, 1993, London : Routledge</p> <p>RB6: Architectural Research Methods, By Groat, L & Wang, D., 2002, NY : John Wiley and Sons Inc.</p> <p>RB7: Research Methodology: Methods and Techniques By Kothari, C.R., 2005 New Delhi : Wishwa Prakashan</p> <p>RB8: Research Methods in the Social Sciences, By Nachmias, C. F. and Nachmias, D., 5th Ed 1996 Great Britain: St. Martin's Press Inc</p> <p>RB9:Handbook of Qualitative Research By Norman K Denzin and Yvonna S Lincoln (Eds.) pp.377-392., 1994, Thousand Oaks : Sage Publications</p> <p>RB10: Qualitative Evaluation Methods, By Patton, M. Q.,1980, Sage Publications</p> <p>RB11:Methods of Architectural Programming, By Sanoff, H, 1977 Dowden Hutchinson and Ross, Inc. Vol. 29,Community Development Series</p> <p>RB12:Visual research methods in design, By Sanoff, H, 1991 USA : Van Nostrand Reinhold</p> <p>RB13:Interpreting Qualitative Data : Methods for Analysing Talk, Text and Interaction By Silverman, D.,1993 , London: Sage Publication</p> <p>RB14:Behavioral Methods in Environmental Design, By William Michelson (ed.),1982 Stroudsburg, Pennsylvania : Dowden Hutchinson and Ross. Inc.</p>		

MAR 120 : THEORY OF LANDSCAPE ARCHITECTURE

School: SUSAP		Batch : 2018-2020
Program: M. Arch		Current Academic Year: 2018-2019
Branch: General		Semester: 1
1	Course Code	MAR 120
2	Course Title	THEORY OF LANDSCAPE ARCHITECTURE
3	Credits	2
4	Contact Hours (L-P-S)	2-0-0
	Course Status	ELECTIVE
5	Course Objective	The objective of this course is to familiarize the students with basic concepts of Landscape Architecture To sensitize the students with the status of landscape resources available in the world
6	Course Outcomes	CO1: The students shall be able to describe the role of landscape resources and biodiversity in landscape CO2: the students shall be able to explain how culture and other key elements of historical context have had an impact on designed and natural settings CO3: The students shall be able to analyze and discuss the role of natural systems in shaping the regional landscape, the role of landscape ecology in understanding these systems, and the role of impact assessment and landscape management in assuring sustainable landscape conservation and development. CO4: The students shall be able to Demonstrate an understanding of the relationships between natural processes and human interventions in the landscape, the range of scales from regional planning to garden design

7	Course Description	Landscape architecture focus on topics such as architectural design, site planning, living space design, urban planning, urban design, park planning, regional planning, and historic preservation
8	Outline syllabus	
	Unit 1	MODULE 1
	1a	Overview of landscape resources at the national level. Significance of biodiversity
	1b	Settlements and Landscape: Siting and evolution of cities in relation to regional landscape resources. The role of landform
	1c	Threats to urban landscape resources; urban environmental issues such as solid waste management
	Unit 2	MODULE 2
	2a	The urban forest: its ecological social and environmental dimensions. Ways of studying urban vegetation. Its role in the urban landscape.
	2b	Landscape heritage: Open space systems, cultural and sacred landscapes, their typology and role in the development of cities.
	2c	Landscape resources specific to distinctive city types: for example: religious centres, historic cities, coastal or port cities, hill station etc.
	Unit 3	MODULE 3
	3a	City development Plans, Zonal Plans and structure plan. Development controls and their role in the conservation and creation of urban landscape.
	3b	National Environment Policy. Developmental and Environmental issues associated with: mountain and hill areas; deserts and wastelands; river and aquatic systems, coastal and estuarine regions, etc.
	3c	The rural landscape: agriculture and forestry as competing uses, the impact of industry and power generation.

Unit 4	MODULE 4		
4a	Forest types of India; introduction to Forest Policy and management of forest resources.		
4b	Conservation Forestry, Agro-Forestry and Social Forestry.		
4c	Agricultural practices and the formation of traditional rural landscape. Illustrative examples from different climatic and geographic regions.		
Unit 5	MODULE 5		
5a	Wetlands: definition, wetland values and conservations. Wastelands management.		
5b	Land reclamation and rehabilitation. Watersheds and the importance of watershed management.		
5c	Resource conservation, land capability classification; mechanical, vegetative and agronomic measures in soil and water conservation.		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%

<p>Text book/s*</p>	<ol style="list-style-type: none"> 1.Schaal ,Hans Dieter (1993) , New Landscape Architecture, Ernst and Sohn 2.Dee, C. (2001) Form and Fabric: A Visual Introduction, London: Spon Press- Taylor and Francis Group. 3.etal., A.a. (n.d) Building and Landscape.? 4.G.B.Tobey (1973) A history of American Landscape architecture, American elsevier Publishing Co.,NY. 5.Hill, P. (2004) Contemporary history of garden design , Birkhauser publishers. 6.Jellico, G.a.S. (1995) The Landscape of Man, Thames & Hudson Publication. 7.Lehrman, J. (1980) Earthly Paradise- Garden and courtyard in Islam, Thames and Hudson. 8.Maria, C.B.J. (n.d) Mastaedi Arain: Landscape Design Today, Spain . 9.Newton, N.T. (n.d) Design on the Land: The Development of Landscape Architecture . 10.Repishti, P.a.F. (2003) Dictionary of today’s landscape designers, SkiraEditores P.A.
<p>Other References</p>	

SEMESTER 2

MAR 122 : DESIGN STUDIO- 2

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 2
1	Course Code	MAR 122
2	Course Title	Design Studio-II
3	Credits	10
4	Contact Hours (L-P-S)	2-2-12
	Course Status	Compulsory
5	Course Objective	<ul style="list-style-type: none"> • Exploring and designing for city level • Understanding the language of city spaces, plazas, etc in architectural design • Learn about the different elements of urban design
6	Course Outcomes	<p>CO1: students should develop skills of drawing and representation</p> <p>CO2: to assimilate learning of graphics, construction, structures and computers to apply to basic design.</p> <p>CO3: Explore creative processes and idea generation and demonstrate critical evaluation of these processes in their projects.</p> <p>CO4: Appraise how design can impact, interact with, and improve environments.</p> <p>CO5: Understand spaces with three-dimensional visualization through the use of block models and appropriate softwares.</p>
7	Course Description	Architectural Design Project of a large magnitude in one of or similar categories of building typology emphasizing on need of Advance construction techniques and using modular co-ordination, pre-fabricated elements and technology.
8	Outline syllabus	
	Unit 1	Design Problem
	A	Introduction to Project
	B	Form and material based investigation
	C	Understanding spatial aspects based on activity, space, form and human scale
	Unit 2	Literature & Case Study
	A	Pre design study-Case study
	B	Pre design study -Literature Study, Site Analysis.

	C	Functional standards.		
	Unit 3	Concept Development		
	A	Concept formulation and idea investigation		
	B	Preparation of design requirements, area requirements based on standards and their interrelation and circulation patterns.		
	C	Concept Formulation, Bubble Diagram and activity zoning.		
	Unit 4	Design Development		
	A	Design development- site development		
	B	Design development- floor Plans		
	C	Design development- sections and elevations		
	Unit 5	Design Presentation		
	A	Design sheets presentation		
	B	Model making on appropriate scale		
	C	Final portfolio submission		
	Mode of examination	Jury		
	Weightage Distribution	CA	MTE	ETE
		50%	0%	50%
	Text book/s*			
	Other References			

MAR 123 : ADVANCED BUILDING SERVICES -I

School: SUSAP		Batch : 2018-2020
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 2
1	Course Code	MAR 123
2	Course Title	ADVANCED BUILDING SERVICES -I
3	Credits	2
4	Contact Hours (L-P-S)	1-1-2
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to develop awareness and understanding of Advanced Building Services(water supply, sanitation & telecommunication electrification and lighting) employed in various complex buildings and address environmental issues related to these services. They should also be aware of the water supply, sewage treatment at the city level.
6	Course Outcomes	CO1:To recognize the need of services (water supply sanitation and waste disposal and telecommunication, electrical and lighting systems in building and at the city/ settlement level. CO2:To explain and understand the various alternatives available in the above mentioned services and their advantages & disadvantages. CO3:To apply the choosen system of respective services and suggest the methodology of these applications.
7	Course Description	The course is designed such that the students are imparted the knowledge of various alternatives available & their applications in their respective services, such as water supply, sanitation & waste disposal and communication, electrification & lighting at the city/settlement level and in building complexes and complex structures.
8	Outline syllabus	
	Unit 1	Water supply & Plumbing systems in high rise building complexes and complex structures

1a	Procurement, demand and distribution of water in large complexes and city/settlement level.
1b	Quality of water consideration for different uses.
1c	Systems and equipment used in Treatment of water for distribution.
Unit 2	Water supply & Plumbing systems in high rise building
2a	Recycling and reuse of water and specialized equipment used for this purpose
2b	Identify special needs for a city/settlement level and different building typology and their water supply system
2c	Case study/ies different building typology and report preparation.
Unit 3	Sanitation and Waste disposal systems in high rise building complexes and complex structures
3a	Collection and disposal systems at city/settlement level and systems used in high rise buildings and complex structures.
3b	Effluent treatment plants and their efficiency, chemical properties of the treated effluent considering the source and end use.
3c	The concept of recycling and reuse of treated effluent. Rainwater harvesting and similar methods of conserving water resources.
Unit 4	Sanitation and Waste disposal systems in high rise building
4a	Disposal of treated effluent into natural sources of water.
4b	Storm/rain/surface water estimation, collection systems and disposal at city/settlement level and in buildings.
4c	Case study/ies different building typology and report preparation.
Unit 5	Electrical, Lighting and telecommunication systems in high rise building complexes public buildings, and complex structures like Hospitals, public transport terminals, IT complexes etc.
5a	Design parameters for determining the loads & requirement, Operation

	and maintenance of these services.		
5b	Case study/ies different building typology and report preparation.		
5c	Lighting systems in high rise building complexes, public buildings, parking lots and complex structures and design parameters for determining the loads & requirement, operation and maintenance of these services		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	RB1:Environment and services –Peter Bucherry RB2:ABC’s of Air Conditioning –Ernest Tricomi RB3: Heating and Air Conditioning of Buildings RB4:Environmental Science –Smith Philips and Sweenay RB5:Mechanical & Electrical Equipment in Buildings RB6:Sanitation, Drainage, & Water Supply – Mitchell RB7:Drainage & Sanitation – E.H. Blake RB8:Heating & Hot Water Supply – Hall. RB9:Architectural Acoustics, By M. David Egan January2007, ISBN: 978-1-932159-78-3 RB10:Architectural Acoustics, By Marshall Long, 2006, Elsevier Academic Press		
Other References			

MAR 109–ADVANCED BUILDING CONSTRUCTION TECHNIQUES

School: SUSAP		Batch: 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: - General		Semester: 2
1	Course Code	MAR 109
2	Course Title	ADVANCED BUILDING CONSTRUCTION TECHNIQUES
3	Credits	2
4	Contact Hours (L-T-P)	1-0-2
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to develop awareness and understanding construction of large span structures, High rise buildings, Pre-fabrication in building construction, Modular co-ordination, and advance building materials
6	Course Outcomes	CO1: Identify various Advance and speedy construction techniques and their structural systems with case examples. CO2: Demonstrate the role of various construction equipment's required for specific and effective construction. CO3: Use and role of advance construction materials and their application CO4: Analyze the process of advance construction practice on site through site visits and case examples.
7	Course Description	This course is designed to introduce the most advance building construction techniques which are very relevant in modern day to day practice. The emphasis is put on the advance construction materials in sync with the construction technology to provide students a holistic understanding and its application which are prevalent in modern day architecture.
8	Outline syllabus	

	Unit 1	Conceptual Understanding of various Large Span Structures
		<p>a. Identification and Understanding Large span structures, its historical context, evolution and relevance in modern architecture.</p> <p>b. Different typologies of large span structures, their usages in relation to building functionality.</p> <p>c. Classification of large span structures e.g. Arcuated, form active, Vector active, Pneumatic structures in relation with their structural behaviour and its application in specific building typologies.</p>
	Unit 2	Construction Details understanding of large span structures
		<p>a. Analysing the structural systems of various large span structures and their application.</p> <p>b. Identification and Understanding the methods of erection, process of integration of different services within the structural system with list of specialised equipment's required.</p> <p>c. Analysis of case examples/live examples to understand the practical and physical application of learning area.</p>
	Unit 3	Study of Advance Building Materials
		<p>a. Identification of advance building materials being used in modern constructions and their usages e.g. Steel alloys, Polymers, Fabrics etc.</p> <p>b. Construction chemicals and their role, area of application, Understanding technical specifications through market survey, manufacture's catalogues.</p> <p>c. Role of specialised equipment's, their typologies, technical data's and their usages in specific conditions.</p>
	Unit 4	Conceptual Understanding of High-Rise Buildings in Normal and Adverse Conditions
		<p>a. Understanding the role of site condition e.g. topography, low lands etc. in designing High-rise Buildings.</p> <p>b. Identification of advance structural systems used in normal and adverse site conditions and their feasibility in specific building typologies.</p> <p>c. Understanding the erection methodology, identification of equipment's requirement. Analysis of case examples/live examples to understand the practical and physical application of learning area.</p>
	Unit 5	Conceptual Understanding of Pre-Fabrication in Building Construction

		<p>a. Understanding prefab system, typologies of prefab system; open, large panel, prefab structural components and their jointing, on-site and off-site prefabrications.</p> <p>b. Application system, sequence of erection, modular components and their assembly system, Understanding grid and reference system and their application with case examples.</p> <p>c. Studio exercise of small building with modular coordination.</p>	
	Mode of examination	Jury	
	Weightage Distribution	CA	ETE
		50%	50%
	Text Books	<p>RB1: Architects working details Vol. 1 to 16</p> <p>RB2 :Time – saver Standards</p> <p>RB3 :Structure in Architecture, by Salvadori and Heller</p> <p>RB4:Design of Steel – Structures by Vazirani – Rathvani</p> <p>RB5: Elements of structure by Morgan</p> <p>RB6:Steel space frames by Makovsky</p>	
	Other References	-	

MAR 115 : CONSTRUCTION PROJECT MANAGEMENT

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 2
1	Course Code	MAR 115
2	Course Title	Construction Project Management
3	Credits	2
4	Contact Hours (L-P-S)	1-1-0
	Course Status	Compulsory
5	Course Objective	<ul style="list-style-type: none"> • After successful completion of this course, student should be able to: • Develop an awareness Significance and Architect's role in Project Management, & Process of Project Management & organization
6	Course Outcomes	<p>CO1: To identify the significance and implications of construction project management</p> <p>CO2: To explain the process of project management and organization</p> <p>CO3: To estimate financial aspects of project management through case studies</p> <p>CO4: To assess the significance of drawings, details and materials in building construction</p>
7	Course Description	This course provides an overview of project management and the essential tools needed to deliver successful projects on time and on budget. Students will learn the fundamental principles of project management including: project initiation, project definition, creation of work breakdown structures, scheduling using Gantt charts and network diagrams, risk management, budgeting and controlling resources, quality assurance, auditing and project termination.
8	Outline syllabus	
	Unit 1	Project Management.
	A	Significance of Project Management
	B	Implications of Project Management
	C	Effect of quality control
	Unit 2	Project Management.
	A	Time and project management
	B	Cost and project management
	C	Architect's role in Project management
	Unit 3	Project & Case Studies
	A	Drawing, Details and Materials
	B	Building Services

	C	Costing and Estimates		
	Unit 4	Process of Project Management		
	A	Project Management and organization		
	B	Monitoring role, PERT / CPM and Network Techniques,		
	C	Requirement & hierarchy of Human,resources. Logistics & co-ordination of activities.		
	Unit 5	Economics &financial accounting system		
	A	legal aspects & accountability		
	B	Manpower and labour laws and managment		
	C	Safety and security of Project		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30 %	20 %	50%
	Text book/s*			
	Other References	RB1: Projects: Appraisal, Analysis, Financing, Implementation & Review; By Prasanna Chandra, TMH publication RB2: Project Management By Kerzner H, CBS Publishers RB3:Project Cost Control in construction; By Pilcher R, Collins RB4:Quality Assurance in Construction, By Dunkan, Thorpe & Summer Gower		

MAR 118 : MASS HOUSING DESIGN STRATEGIES AND STANDARDS

School: SUSAP		Batch : 2018-20
Program: B. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 2
1	Course Code	MAR 118
2	Course Title	Mass Housing Design Strategies And Standards
3	Credits	2
4	Contact Hours (L-P-S)	2-0-0
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, students should be able to understand strategies adopted in Mass Housing projects of various nature and issues related to Design considerations.
6	Course Outcomes	<p>CO1: analysis Mass Housing projects with respect to Need / Demand , socio-economic conditions.</p> <p>CO2: Government policies for promotion, Development control, Finance and Pricing.</p> <p>CO3: Technology and Time constraints.</p> <p>CO4: Evolving Design</p>
7	Course Description	Study of special design considerations for the user, etc. Mass housing project for various income groups in urban areas. Density distribution, servicing, etc. Mass housing project for Slum Improvement schemes by government or private organizations, old age people. Rehabilitation / transit accommodation /camps for people affected by natural disasters like earthquake, floods, refugees, or other disasters. Case studies with analysis of the mass housing projects with respect to of the project considering socio-economic conditions. Government policies for promotion, development control, finance and pricing, technology and time constraints. Study of geography, local conditions and climatic conditions influencing the housing design decisions. Evolving design brief for the project, progress of construction and completion.
8	Outline syllabus	
	Unit 1	Introduction of the subject Housing Design Strategies and Standards.
	A	Various types /classification of Housing
	B	Housing needs and Policies
	C	Role of Govt. NUHHP 2007 etc.
	Unit 2	Roll of Developing Sustainable Housing
	A	Aims of Hsg. Policy
	B	Research & Development in mass housing projects
	C	Standardisation & technology, Legal and Regulatory Reforms.

	Unit 3	Analysis and presentation of case Study 1.		
	A	Selection of a Mass housing project for combinations of income groups		
	B	Site and requirement analysis with input on planning		
	C	Existing and proposed policies.		
	Unit 4	Analysis and presentation of case Study 2 &3		
	A	Selection of a housing project for Slum Improvement scheme by Government or private organizations and a project on Rehabilitation / transit accommodation /camps for people affected by natural disasters like earthquake, floods, refugees, or other disasters		
	B	Site and requirement analysis with input on planning for both the above.		
	C	Existing and proposed policies.		
	Unit 5	Analysis and presentation of case Study 4.		
	A	Selection of a Mass housing project for Old Age people.		
	B	Site and requirement analysis with input on planning		
	C	Existing and proposed policies.		
	Mode of examination	Theory		
	Weightage Distribution	CA 30 %	MTE 20 %	ETE 50%
	Text book/s*			
	Other References	RB1: Housing By Macsai John 1982 John Wiley and Sons, New York RB2:Population and Housing problems inIndiaVol. I & II Maurya S. D.,1989 Chugh Publication, Allahabad RB3: The social impact ofhousing goals standards 1977 U. N., New York RB4: G.I.C. :An Introduction tohousing layout 1978 HNS		

MAR 114: ELECTIVE- FUTURISTIC ARCHITECTURE

School: SUSAP		Batch : 2018-20
Program: B. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 2
1	Course Code	MAR 114
2	Course Title	Futuristic Architecture
3	Credits	2
4	Contact Hours (L-P-S)	1-1-0
	Course Status	Elective
5	Course Objective	The idea behind this course is to understand the relationship of architecture to changes in society and to be able to project the future architecture content and work towards such needs
6	Course Outcomes	CO1: To ensure the past and present design trends and define futuristic architectural design CO2: To identify futuristic building forms and structural system CO3: To assess future projection techniques CO4: To compare advance construction techniques and technologies
7	Course Description	This course covers topics on future trends of architecture and its practice.
8	Outline syllabus	
	Unit 1	Introduction to Futurology
	A	Study of postulating possible, probable, and preferable futures and the worldviews and myths that underlie them
	B	Terminology like Foresight, Probability; Predictability
	C	Futures techniques, Shaping Alternative futures
	Unit 2	Change in design philosophy
	A	Review of design philosophy of past and present and the trends experienced
	B	Futuristic design in context with technological advancement
	C	Implications of changing cultural context on architectural design philosophy
	Unit 3	Future Projection Techniques
	A	Building alternative scenarios and models
	B	Near and Long term predictions
	C	Trend Analysis, Forecasting, simulation and other techniques
	Unit 4	Futuristic building forms and structural systems
	A	Future building design determinants
	B	Futuristic building forms
	C	Structural systems catering to future building design needs
	Unit 5	Innovations in building materials, construction techniques and

	technologies		
A	New building materials		
B	New construction techniques		
C	Advanced construction technology and management		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30 %	20 %	50%
Text book/s*			
Other References	RB1: Future Shock By Alvin Toffler, 1970, Random House RB2: 2081: A Hopeful View of the Human Future By Gerard O'Neill 1981, Simon & Schuster RB3 : Futurewise By Patrick Dixon, 2007, HarperCollins, Profile Business RB4: A Short History of the Future By W. Warren Wagar, 1989 RB5: Sustainability By Patrick Dixon and Johan Gorecki, 2010, Kogan Page RB6 : Nineteen Eighty-Four By George Orwell		

SEMESTER 3

MAR 201: DESIGN STUDIO -3

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 3
1	Course Code	MAR 201
2	Course Title	Design Studio-II
3	Credits	8
4	Contact Hours (L-P-S)	2-0-12
	Course Status	Compulsory
5	Course Objective	1.Acquire a comprehensive base of knowledge required for the practice of architecture. 2.Develop awareness in physical context about implications of limited sources in design decision making.
6	Course Outcomes	CO1: To illustrate the knowledge related to design acquired in preceding years CO2: Analyse the context and situation of the design problem CO3: To produce architectural drawings related to design for the problem laid. CO4: To construct a design solution by applying principles learnt in the context of the given environment
7	Course Description	Architectural Design Project of a large magnitude in one of or similar categories of building typology emphasizing on need of Advance construction techniques and using modular co-ordination, pre-fabricated elements and technology.
8	Outline syllabus	
	Unit 1	Design Problem
	A	Introduction to Project
	B	Form and material based investigation
	C	Understanding spatial aspects based on activity, space, form and human scale
	Unit 2	Literature & Case Study
	A	Pre design study-Case study
	B	Pre design study -Literature Study, Site Analysis.
	C	Functional standards.
	Unit 3	Concept Development
	A	Concept formulation and idea investigation
	B	Preparation of design requirements, area requirements based on standards and their interrelation and circulation patterns.
	C	Concept Formulation, Bubble Diagram and activity zoning.
	Unit 4	Design Development
	A	Design development- site development

	B	Design development- floor Plans		
	C	Design development- sections and elevations		
	Unit 5	Design Presentation		
	A	Design sheets presentation		
	B	Model making on appropriate scale		
	C	Final portfolio submission		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		50%	0%	50%
	Text book/s*			
	Other References	RB1: Planning and Architecture, Edited by Dennis Sharp Editor RB2: Planning feasible learning places, by Leggett S Bru Baker C. W. & Cohodes A. RB3: Methods in Architecture, by Town Health		

MAR 202: RESOURCE CONSERVING ARCHITECTURE

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-2019
Branch: General		Semester: 3
1	Course Code	MAR 202
2	Course Title	RESOURCE CONSERVING ARCHITECTURE
3	Credits	3
4	Contact Hours (L-P-S)	2-1-1
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to acquire a comprehensive base of knowledge required to understand & apply the principles, techniques and relevant guidelines for planning and design of resource-conserving architecture.
6	Course Outcomes	CO1: Identify and understand the main methods of natural resource conservation and its history and briefly review of concepts of energy conservation and efficient patterns of energy use in architecture CO2: Analyze and compare different methods of planning and design of resource conservation in architecture CO3: Develop inclination and sensibility towards resource optimization in the built environment through Indian and foreign case studies
7	Course Description	
8	Outline syllabus	

Unit 1	Introduction to resource conserving in architecture and its history
1a	Classification and characteristics of resources.
1b	Brief review of use/ exploitation of resources for development in human history.
1c	Concepts and need for conservation, renewable and non-renewable resources.
Unit 2	Brief review of concepts, parameters and principles of energy conservation
2a	Basic concepts, parameters and principles of energy conservation.
2b	Brief review of concepts of conserving building materials, water, land etc.
2c	Discussion of Indian and foreign case studies.
Unit 3	Patterns and efficiency of energy use in architecture
3a	Technologies, methods of energy conservation
3b	Conserving building materials in architecture, (case studies)
3c	Technologies/ methods of conservation and their implications.
Unit 4	Fundamentals of planning and design of resource conserving architecture
4a	Innovative and appropriate Design concepts
4b	Construction Technologies involved in resource conserving architecture (case study)
4c	Govt. policies/ Guidelines on the subject of resource conservation in architecture.
Unit 5	Discussion /Presentation of Indian and foreign case studies
5a	Case study I {Indian}

5b	Case study 2{Indian}		
5c	Case study 1(foreign)		
Mode of examination	Theory		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text book/s*	RB1 : Greg P., “Natural Home Heating”,Sterling Hill Production. , 2003 RB 2 : Hyde R., Wodson S., Chehire W. and Thowson M., “The Environmental Brief Pathways for Green Design”, Taylor & Francis. , 2006 RB 3 :Yudelson J., “Greening Existing Buildings”, Mc Graw Hills. , 2009 RB 4 : Baker, N. and Steemers, K., “Energy and Environment in Architecture: A Technical Design Guide”, Routledge. , 2000		
Other References			

MAR 203: ARCHITECTURAL EVALUATION & DOCUMENTATION

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: - General		Semester: 3
1	Course Code	MAR 203
2	Course Title	Architectural Evaluation & Documentation
3	Credits	2
4	Contact Hours (L-T-P)	2-1-0
	Course Status	Core
5	Course Objective	<p>After successful completion of this course, student should be able to:</p> <p>1- To have acquired the ability to analyse and evaluate architectural projects etc. and also Understand architectural research with special emphasis on India.</p> <p>2- To develop awareness and understanding of importance of Documentation, Research and Surveys practice of Architecture.</p>
6	Course Outcomes	<p>CO 1: Demonstrate skill in undertaking various aspects of Architectural Evaluation and techniques of analysis.</p> <p>CO 2: illustrate abilities towards architectural critical thinking ,review and writing.</p> <p>CO 3: Ability to categorise methodology of research based on area of study -historical, cultural</p>
7	Course Description	The idea behind this module is to understand the basic Architecture documentation which is both prescriptive and descriptive. That is, for some audiences it prescribes what should be true by placing constraints on decisions to be made. For other audiences it describes what is true by recounting decisions already made about a system's design.
8	Outline syllabus	

Unit 1	Introduction to architectural evaluation & Techniques of analysis & evaluation.	
	<ol style="list-style-type: none"> 1. Introduction to architectural evaluation in general and definition, Purpose, Scope and its applications to Architecture, fine arts literature etc. 2. Techniques of analysis and evaluation employed in buildings, projects competitions etc. 3. Methods of appraisal / evaluation of building complexes and. 	
Unit 2	exhibitions Value of appraisal / evaluation reports and review, Techniques of report and review writing	
	<ol style="list-style-type: none"> 1. Value of appraisal / evaluation reports and reviews in the field architecture fine arts, literature. 2. Their scope and merits 3. Techniques of report and review writing, their application architectural Publications 	
Unit 3	Purpose of Documentation, Selection of the project.	
	<ol style="list-style-type: none"> 1. Purpose of Documentation: To Record Existing structure, to aim conservation of the structure, etc. 2. Selection of the project 3. Heritage documentation, Monograph of an Architect, Contemporary project, etc. 	
Unit 4	Research: Historical research	
	<ol style="list-style-type: none"> 1. Research: historical research related to Styles and contemporary works 2. Influence of culture and technology, 3. Context 	
Unit 5	Geodetic Survey and final presentation	
Mode of examination	Jury	
Weightage	CA	ETE

Distribution	50%	50%
Textbooks	RB 1 - Research in Architecture by Architects by Dr. Lean Van Schaik RB 2 - Architecture and people by Eugene Raskin RB 3 -Architecture and Critical imaginations by Attoe Wayne RB 4 - Architecture Judgement by Collin Peters	
Other References		

MAR 204: ADVANCED BUILDING SERVICES –II

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 3
1	Course Code	MAR 204
2	Course Title	Advanced Building Services - II
3	Credits	3
4	Contact Hours (L-P-S)	2-1-1
	Course Status	Compulsory
5	Course Objective	After successful completion of this course, student should be able to develop awareness and understanding of Advanced Building Services(water supply, sanitation & telecommunication electrification and lighting) employed in various complex buildings and address environmental issues related to these services. They should also be aware of the water supply, sewage treatment at the city level.
6	Course Outcomes	CO1:To recognize the need of services (water supply sanitation and waste disposal and telecommunication, electrical and lighting systems in building and at the city/ settlement level. CO2:To explain and understand the various alternatives available in the above mentioned services and their advantages & disadvantages. CO3:To apply the choosen system of respective services and suggest the methodology of these applications.
7	Course Description	The course is designed such that the students are imparted the knowledge of various alternatives available & their applications in their respective services, such as water supply, sanitation & waste disposal and communication, electrification & lighting at the city/settlement level and in building complexes and complex structures.
8	Outline syllabus	
	Unit 1	Mechanical & Communication systems (elevators, escalators, conveyors, etc.) and Security systems etc.in high rise building complexes, public buildings and open spaces & Parking, etc.:
	A	Study of Mechanical, Communication & Security systems in high rise building complexes, public buildings, Parking lots and complex structures like Hospitals, public transport terminals etc.
	B	Design parameters for determining the loads & requirement, Operation and maintenance of these Services.
	C	Case study/ies different building typology and report preparation.
	Unit 2	Lighting, Heating, Ventilation & Air conditioning systems in high-rise building complexes, public buildings and open spaces, Parking, etc.:
	A	Lighting, Heating, Ventilation & Air conditioning systems in high rise building complexes, public buildings, Parking lots and complex structures like Hospitals, public transport terminals etc.

	B	Design parameters for determining the loads & requirement, Operation and maintenance of these Services.		
	C	Passive & active ways of control of heat, light, humidity etc. for comfort conditions. Introduction to simulation software to determine comfort conditions in various spaces.		
	Unit 3	Lighting, Heating, Ventilation & Air conditioning systems.....continued		
	A	Introduction to simulation software to determine comfort conditions in various spaces.		
	B	Intelligent building systems.		
	C	Case study/ies different building typology and report preparation.		
	Unit 4	Acoustics and Acoustic Systems		
	A	A brief overview of Acoustics and Acoustic Systems in building.		
	B	Design parameters for determining the acoustical behaviour of spaces. Passive & active ways of control of acoustical behaviour of spaces for good hearing conditions. Introduction to simulation software to determine acoustical behaviour of spaces.		
	C	Study of advance acoustical materials, types of finishes & treatments, specially manufactured items from manufacturer's catalogues, etc. Case study/ies different building typology and report preparation.		
	Unit 5	Fire Protection and Prevention System		
	A	Code provisions from NBC for Fire protection and prevention in high rise building complexes, public buildings, Parking lots and complex structures like Hospitals, public transport terminals educational buildings, building types categorised under etc.		
	B	Design parameters for determining the loads & requirement.		
	C	Study of advance materials, types of finishes & treatments, specially manufactured items from manufacturer's catalogues, etc for prevention of fire and fire-fighting		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References	RB1:Environment and services –Peter Bucberry RB2:ABC's of Air Conditioning –Ernest Tricomi RB3: Heating and Air Conditioning of Buildings RB4:Environmental Science –Smith Philips and Sweenay RB5:Mechanical & Electrical Equipment in Buildings RB6:Sanitation, Drainage, & Water Supply – Mitchell RB7:Drainage & Sanitation – E.H. Blake RB8:Heating & Hot Water Supply – Hall. RB9:Architectural Acoustics, By M. David Egan January2007, ISBN: 978-1-932159-78-3 RB10:Architectural Acoustics, By Marshall Long, 2006, Elsevier Academic Press		

MAR 205 – Dissertation

School: SUSAP		Batch : 2017-19		
Program: M. Arch		Current Academic Year: 2018-19		
Branch: General		Semester: 3		
1	Course Code	MAR 205		
2	Course Title	Dissertation		
3	Credits	2		
4	Contact Hours (L-T-P)	1-2-0		
	Course Status	Compulsory		
5	Course Objective	<ol style="list-style-type: none"> 1. Familiarize students with need and scope of research. 2. Learn how to identify a subject for dissertation. 3. To able to undertake a research study independently. 		
6	Course Outcomes	CO1: Identify a meaningful area/topic of study. CO2 : Construct a logical description CO3 : Summarize works of scholars. CO4 : Apply skills learnt to prepare study report independently.		
7	Course Description	On completing this course, students are to acquire basic skills required to undertake research write a comprehensive report on the subject studied.		
8	Outline syllabus			
	Unit 1	Read and learn basics of researched documents		
		Sub Module a,b,c		
	Unit 2	1/d a subject of study		
		Sub Module a,b,c		
	Unit 3	Refer and Infer from studies on similar subjects		
		Sub Module a,b,c		
	Unit 4	Collect data and analyse for inferences		
		Sub Module a,b,c		
	Unit 5	Prepare report and present		
		Sub Module a,b,c		
	Mode of examination	Jury		
	Weightage Distribution	CA 50%	MTE 0%	ETE 50%
	Text book/s*			
	Other References			

MAR 206 - TRAFFIC & TRANSPORT DESIGN

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: - General		Semester: 3
1	Course Code	MAR 206
2	Course Title	TRAFFIC & TRANSPORT DESIGN
3	Credits	3
4	Contact Hours (L-P-S)	2-1-0
	Course Status	Elective
5	Course Objective	After successful completion of this course, student should be able to understand evaluation of Urban Structure and Transportation, Management of Transportation system, policies in relation to the Environment considerations
6	Course Outcomes	CO1: Recognize Urban Structure Transportation systems infrastructure, Transportation survey and studies CO2 : Describe the various transportation survey and study types CO3 : Categorisemanagement of Transportation system and Regional Transport systems CO4 : Evaluate both Transport and Environment CO5 : Develop an understanding of transport policies
7	Course Description	This course is designed to help the students understand about the urban structure transportation systems , their management processes, integration of environment with transport and have a broad idea of transport policies set by the government at the various levels , such as central, state and urban local body level.
8	Outline syllabus	
	Unit 1	Evaluation of Urban Structure Transportation systems

		<ul style="list-style-type: none"> a. Evaluation of Urban Structure Transportation systems infrastructure and management, transportation systems and their types and their design and operating characteristics. b. Urban road hierarchy planning, engineering and management. c. Criteria for road and junction improvements and arterial improvement techniques
	Unit 2	Transportation survey and studies
		<ul style="list-style-type: none"> a. Study area definitions, surveys and their types, sampling methods, survey techniques; b. designing O-D and other Traffic and transportation surveys, programming and scheduling, processing of travel data, c. Analysis and interpretation of traffic studies.
	Unit 3	Management of Transportation system
		<ul style="list-style-type: none"> a. Existing organizational and legal framework, traffic and environment management techniques and review of existing traffic management schemes. b. Framework for evaluation of system option and plan preparation c. Regional Transport system: Importance of accessibility in regional transport planning. Role of road, rail, air and water transport systems. Regional transport systems, planning road network, planning for micro regions
	Unit 4	Transport and Environment
		<ul style="list-style-type: none"> a. Traffic noise, factors affecting noise, noise abatement measures, standards b. Air pollution standards, traffic safety, accident reporting and recording systems. Factors affecting road safety, transport planning for target groups children, adults handicapped and women. c. Norms and guidelines for highway landscape, street lighting types, standards and design considerations, transport and environment, EIA of transport project
	Unit 5	Transport policies

	<p>a. Review of national, state and local level transport policies and the relevance in spatial and economic planning, pricing and funding transport systems, transport technology, energy and environmental implication in transport planning in developing countries; planning of public transportation; planning for bicyclists and pedestrians.</p> <p>b. Regional road network planning, highway project planning and financing Public transportation planning.</p> <p>c. Overviews of system technologies, technological options, characteristics choice of technology corridor analysis integrated system plan concept, system selection, legal and institutional provisions, pricing and financing of public transport service.</p>		
Mode of examination	Theory examination		
Weightage Distribution	CA	MTE	ETE
	30%	20%	50%
Text Books	RB1: Urban Transit: Operations, Planning and Economics by Vukan Vuchic RB2: Urban Transit Systems and Technology by Vukan R. Vuchic		

SEMESTER 4

MAR 208 – Architectural Design Thesis

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 4
1	Course Code	MAR 208
2	Course Title	Architectural Design Thesis
3	Credits	14
4	Contact Hours (L-T-P)	4-0-20
	Course Status	Compulsory
5	Course Objective	<ol style="list-style-type: none"> 1. Identify a contextually challenging architectural design problem. 2. Evolve strategy to evolve a good solution. 3. Evolve present and defend the proposed design
6	Course Outcomes	CO1: Identify a socio economic environmental context in need of a good architectural design for a key project. CO2 : Construct a database design brief noted in the context and knowledge base. CO3 : Analyse and prioritize the process to arrive at design solution. CO4 : Develop and present the proposed design.
7	Course Description	The programme offers opportunity to the students to demonstrate his ability and skills to conceive a project, evolve its functions and spaces and also evolve an original design. The final proposal to be presented in appropriately rendered drawings, modules, 3D views and Report.
8	Outline syllabus	
	Unit 1	Identification of the project , preparation of Synopsis
		a) Introduction/Background
		b) Aims & Objective, Rationale of the topic
		c) Site Identification and justification
	Unit 2	Literature Study , Case study
		a) Identify and group together common areas.
		b) Compare, contrast and evaluate issues.
		c) Demonstrate why the topic and research is relevant to your field of study.
	Unit 3	Program formulation
		a) Detailed Design Program
		b) Design Criteria / Approach specific to the topic chosen
		c) Conceptual Design
	Unit 4	Design interventions
		a) Preliminary Design Drawings

		b) Service Drawings		
		c) Landscape / Site Details		
Unit 5	Design Proposal and Report			
		a) Detailed design proposal		
		b) Supporting literature study		
		c) All Drawings & Report		
Mode of examination	Jury			
Weightage	CA	MTE	ETE	
Distribution	50%	0%	50%	
Text book/s*				
Other References				

MAR 209 – Legislation, Politics and Architecture Practice

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 4
1	Course Code	MAR 209
2	Course Title	Legislation, Politics and Architecture Practice
3	Credits	2
4	Contact Hours (L-P-S)	2-1-0
	Course Status	Compulsory
5	Course Objective	<ol style="list-style-type: none"> 1. Introduce students to the Town Planning Acts and basic ideas of Town Planning 2. Introduce students to the Architects Act 1972 and its use. 3. Familiarize students to related acts such as EPA 1986.
6	Course Outcomes	CO1: Recognize the importance of Town Planning CO2 :Interpret the contents of Architects and other Acts CO3 : Illustrate how Acts, Regulation are applied for architectural design. CO4 : Appraise role of local authorities in India and abroad.
7	Course Description	An introductory course to make students aware about contemporary national and global issues that influence professional activities and demand training in allied areas such as management, town planning environmental protection.
8	Outline syllabus	
	Unit 1	Module 1: An overview of the Architects Act 1972 in India & COA.
	A	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.
	B	Regional Plan, Development Plans, at State, District, Urban agglomeration, Municipal Corporations & Councils, Improvement

		trusts & Regional Development Authorities, CRZs, etc.		
	C	Procedures for formulations, Implementation and applying for Approvals at various levels.		
	Unit 2	Module 2: Various Acts relevant to the Architectural profession		
	A	Architects office and office Management. Interaction with the consultants.		
	B	Design Management Issues. Role & Duties of Architect as an Employer or Employee.		
	C	International Architectural practice and role of Various Statutory / Regulatory bodies in licensing like RIBA, AIA, etc		
	Unit 3	Module 3 : Town Planning Acts of Urban Development ministry of States & Central Government.		
	A	1972 in India – Scope of work, Professional conduct, Scale of fees, etc.		
	B	Architect's Professional liabilities and responsibilities.		
	C	Architectural Competitions. Registration and continuation of registration of COA.		
	Unit 4	Module 4 : Rules and Regulations		
	A	Development Control Rules, R P, DP, at State, District, Urban agglomeration, Local planning Authorities, CRZs, etc		
	B	An overview of various Acts relevant to the Architectural profession: Taxation laws like IT, Service Tax, etc		
	C	An overview of various Acts relevant to the Architectural profession: like Indian Contract Act, Environment related laws, etc		
	Unit 5	Module 5 : - Regulations, Conditions and requirements of qualification, equivalence etc. for International practice		
	A	Regulations for International practice in countries other than India like: USA, UK, Europe, Gulf countries, Asian countries etc.		
	B	Conditions and requirements of qualification, equivalence etc. for International practice in countries other than India like: USA, UK, Europe, Gulf countries, Asian countries etc.		
	C	Role & Duties of International Architectural practice		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References	RB1: COA Handbook of Professional Documents 2009 RB2: Maharashtra Regional Town Planning Act 1966		

		<p>RB3: Land Revenue Code 1966 RB4: Professional Practice By Roshan Namavati 2005 Lakhani Book Depot RB5: Professional Practice By Madhav Deobhakta RB6: COA Handbook of Professional Documents RB2: Income Tax Act RB3 :Service Tax Act RB4: Environmental Laws RB5: Indian Contract Act</p>
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MAR 210: ELECTIVE-1 FINANCE & ECONOMICS IN BUILDING INDUSTRY

School: SUSAP		Batch : 2017-19
Program: M. Arch		Current Academic Year: 2018-19
Branch: general		Semester: 4
1	Course Code	MAR 210
2	Course Title	Elective-1 Finance & Economics In Building Industry
3	Credits	2
4	Contact Hours (L-P-S)	2-1-0
	Course Status	Elective
5	Course Objective	After successful completion of this course, student should be able to: 1. To understand Factors influencing Location of development, issues like Business Finance, Sources of Finance, Capital Market, Financial Services etc.
6	Course Outcomes	CO1: To identify the significance and scope of building economics CO2: To discuss factors affecting location, productivity and efficiency of development CO3: To evaluate sources of finance CO4: To compare different scale projects and financing of projects
7	Course Description	The idea behind this module is to understand the relevance of finance and economics in the building industry
8	Outline syllabus	
	Unit 1	Building Economics
		a. Introduction to Building Economics: Meaning & Scope
		b. Need and Significance of Study of building Economics.
		c. Inter-Dependence of Agriculture, Industrial and Economic Development
	Unit 2	Factors influencing Location of development
		a. Factors influencing Location of development.
		b. Factors affecting productivity and efficiency like Social & Cultural
		c. Factors affecting productivity and efficiency like Industrialisation, Urbanisation.
	Unit 3	Large, medium and small scale development
		a. Large, medium and small scale development in Private Sector.
		b. Large, medium and small scale development in Public Sector.
		c. Housing Policy of Indian Government
	Unit 4	Business Finance & Sources of Finance
		a. Estimating the short, Medium and long term financial requirements.
		b. Financial Plan- Characteristics & Limitations.
		c. Sources of Finance: Private Sector, Public Sector, Co-operative Sector Govt. Participation, and Foreign Sources.
	Unit 5	Capital Market & Financial Services

		a. Capital Market: Primary and Secondary Capital Market Players. Functioning & Critical Evaluation.		
		b. Financial Services relating to raising of Capital: Loan policies of Banks, Private, Public, & Government financial bodies.		
		c. Project Appraisal		
	Mode of examination	Theory		
	Weightage Distribution	CA	MTE	ETE
		30%	20%	50%
	Text book/s*			
	Other References	Financial Management –Theory and Practice, By Prasanna Chandra Tata McGraw Hill Financial Management By I M Pandey, Vikas PublishingHouse Managerial Finance, By J Fred Weston & Thomas E Copeland, The Dryden Press, New York. Fundamentals of Financial Management, By Van Horne J, C Prentice Hall, New Delhi Construction Management: Planning & Finance, By Cormican D, Construction Press, London		

MAR 211: ELECTIVE-2 HIGH RISE BUILDINGS

School: SUSAP		Batch : 2018-20
Program: M. Arch		Current Academic Year: 2018-19
Branch: General		Semester: 4
1	Course Code	MAR 211
2	Course Title	ELECTIVE-2 HIGH RISE BUILDINGS
3	Credits	2
4	Contact Hours (L-P-S)	2-1-0
	Course Status	Elective
5	Course Objective	To understand basic design concepts and emerging technologies of high rise buildings. Acquire a comprehensive base of knowledge required to understand & apply the principles, techniques and relevant guidelines for planning and design of high rise buildings.
6	Course Outcomes	CO1: To understand basic design concepts and emerging technologies of high rise buildings. CO2 : Acquire a comprehensive base of knowledge required to understand & apply the principles, techniques and relevant guidelines for planning and design of high rise buildings.
7	Course Description	
8	Outline syllabus	
	Unit 1	Introduction to High Rise Buildings
		Definition, Scope and importance of subject.
		High rise buildings in urban environment.
		Physical planning considerations in High Rise Buildings.
	Unit 2	Module 2: Design considerations for High Rise Buildings.
		Architectural design considerations for high rise buildings,
		Space planning and design standards,
		Building byelaws and codes.
	Unit 3	Module 3: Structural Systems & Building Services for High Rise Buildings.
		High rise buildings Structural systems in RCC

		Steel for high rise buildings.		
		Composite structural system considerations for wind loads and earthquake loads.		
	Unit 4	Module 4: Construction Planning and Management in High Rise Buildings.		
		Building Services- mechanical, electrical, fire fighting and protection, vertical transportation, HVAC, BAS and parking; Codes for these services.		
		Construction planning and management.		
		Equipments and construction techniques, materials for cladding, prefabrication.		
	Unit 5	Module 5: Sustainable and Green high rise buildings		
		An approach to sustainable and green high rise buildings		
		Design Guidelines for sustainable and green high rise buildings.		
		Concepts of Zero Energy Habitat.		
	Mode of examination	Theory		
	Weightage	CA	MTE	ETE
	Distribution	30%	20%	50%
	Text book/s*			
	Other References	RB1: Design of Modern Highrise Reinforced Concrete Structures by Hiroyuk RB2: High-rise Manual: Typology and Design, Construction and Technology by Johann Eisele and Ellen Kloft		