SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMAKURU
School of Architecture

Vision

To establish as a pioneer institute in planning and design of built environment through excellence in teaching, research, consultancy and design innovation.

Mission

- To create conducive academic ambience that nurtures aesthetic attitude, technical confidence, and critical thinking among students.

- To develop research and design innovation skills in students to address various societal needs.

- To inculcate professional ethics based on values and entrepreneurial skills among students.

Program Educational Objectives (PEO's)

Graduates from school of Architecture will achieve the following Program Educational Objectives within few years of graduation

- Graduates will showcase capabilities for competent practice of Architecture and enhance career by pursuing higher education

- Graduates will exhibit strong design skills to solve complex real-time problems through high technical skills and strong communication along with the knowledge of various domains of architecture including landscape, architectural conservation, interior design, energy conscious architecture, urban design and planning, construction project management, alternative building techniques, building information modeling and digital architecture

- Graduates will demonstrate professionalism, ethical conduct, societal concerns, effective team work and adapt to dynamic global and local needs engaging in lifelong learning

Program Specific Outcomes (PSO's)

PSO1: Develop critical thinking to analyze, evaluate, synthesize and generate appropriate design solutions for varying scales and levels of complexity.

PSO2: Explore possibilities and application of various building materials, construction techniques, building systems and services.

PSO3: Draw inspiration from divergent architectural theories and history along with varied indigenous and vernacular settings.

PSO4: Demonstrate effective communication skills to present architectural works and comprehend professional practice.

Programme Outcomes (PO's)

1. **Architectural Knowledge:** Apply the knowledge of design principles, building systems & technologies, humanities and environmental aspects in design, planning and construction.

2. **Problem Analysis**: Identify, formulate, review research literature and analyse various scales of architectural projects to arrive at tangible conclusions.

3. **Design/ Development of solutions:** Design solutions to integrate interdisciplinary approach for contextual issues pertaining to built-environment.

4. **Conduct investigations of complex problems:** Use research-based knowledge and methodologies including context analysis, case studies, project requirements and synthesis of the information to provide context sensitive solutions.

5. **Modern tool usage:** Identify, select and apply the appropriate tools, techniques and resources to predict, design and simulate qualitative and quantitative outcomes with an understanding of its limitations.

6. **The Architect and Society:** Apply reasoning to address socio-cultural, legal and safety aspects relevant to the professional practice and social responsibility.

7. **Environment and Sustainability:** Understand the importance of the architectural design solutions in environmental and social contexts to demonstrate the need for sustainable built environment.

8. **Ethics:** Apply ethical principles and commit to professional ethics, responsibilities and norms of Architectural profession.

9. **Individual and teamwork:** Function effectively as an individual as well as a team member or a leader in diverse interdisciplinary settings.

10. **Communication:** Comprehend and effectively communicate issues related to architecture, community and society at large through documentation, graphical and verbal presentations.

11. **Project management and Finance:** Demonstrate knowledge and understanding of professional and management principles to apply to individual work, as a team member and as a leader, to manage projects in multidisciplinary environments.

12. **Life-Long learning:** Recognize the need for, have the preparation and ability to engage in independent and lifelong learning in the changing domain of societal and technological advancement and adopt it in individual's professional practice.

SYLLABUS

FOR

IX and X semester B.ARCH

2024 -2025
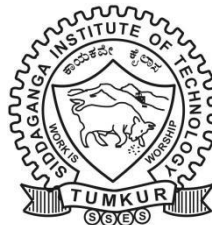
School of Architecture

Siddaganga Institute of Technology

(An Autonomous Institution affiliated to V.T.U., Belagavi, Approved by AICTE, New Delhi Accredited by NAAC with 'A++' Grade and ISO 9001:2015 Certified)

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B.ARCHITECTURE
SCHEME OF TEACHING AND EXAMINATION (260 Credits Scheme)
(Applicable to the students admitted during 2020-21)

IX Semester

Sl. No.	Course and Course Code		Course Title		Teaching / Paper setting Dept.	Teaching hrs/week				Examination					Credits
						Lecture	Studio	Practical	Self Study Component	Duration in hrs.	Mode of Exam	CIE Marks	SEE Marks	Total Marks	
						L	S	P	SS						
1.	PCC	9ARL1	Architectural Design-VIII			3	6		3		Viva	50	50	100	12
2.	AEC	9ARL2	Research Skills and Project Introduction				6				Viva	50	50	100	6
3.	PCC	9AR01	Urban and Regional Planning			3				3	Theory	50	50	100	3
4.	AEC	9AR02	Construction Project Management			3				3	Theory	50	50	100	3
5.	PEC	9ARE	Elective-III	Architectural Conservation (9ARE1)			2				Term Work	50	50	100	2
				Bio-Mimicry (9ARE2)											
				Geographic Information System (9ARE3)											
			Total			9	14		3			250	250	500	26

Note: PCC: Professional Core Course, **BSAE**: Building Science and Applied Engineering Course, **HSMC**: Humanity and Social Science & Management Course, **SEC** –Skill Enhancement Course, **AEC**- Ability Enhancement Course, **PEC**- Professional Elective Course, **NCMC**- Non-Credit Mandatory Course, **OEC**- Open Elective Course
L –Lecture, **S**- Studio, **P**-Practical, **SS** – Self-Study Component, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Examination

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B.ARCHITECTURE
SCHEME OF TEACHING AND EXAMINATION (260 Credits Scheme)
(Applicable to the students admitted during 2020-21)

X Semester

Sl. No.	Course and Course Code		Course Title	Teaching / Paper setting Dept.	Lecture	Studio		Practical	Self Study Component	Duration in hrs.	Mode of Exam	CIE Marks	SEE Marks	Total Marks	Credits
					L	Core	Applied	P	SS						
1.	PCC	10ADP	Architectural Design Project			9	9				Viva	50	50	100	**18**
2.	PEC	10ARE	Elective-IV: Disaster Management (10ARE-2), Rural Planning & Infrastructure (10ARE-3), Architecture Journalism (10ARE-4)			2					Term Work	50	50	100	**2**
			Total			11	9					**100**	**100**	**200**	**20**

Note: PCC: Professional Core Course, **BSAE**: Building Science and Applied Engineering Course, **HSMC**: Humanity and Social Science & Management Course, **SEC** –Skill Enhancement Course, **AEC**- Ability Enhancement Course, **PEC**- Professional Elective Course, **NCMC**- Non-Credit Mandatory Course, **OEC**- Open Elective Course

L –Lecture, **S**- Studio, **P**-Practical, **SS** – Self-Study Component, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Examination

SIDDAGANGA INSTITUTE OF TECHNOLOGY
Tumakuru-572103

(An Autonomous Constituent Institution of Visvesvaraya Technological University, Belagavi)

SCHOOL OF ARCHITECTURE

DETAILED SYLLABUS FOR
NINTH SEMESTER
B. ARCHITECTURE

ARCHITECTURAL DESIGN - VIII

Contact Hours/Week	:	12	Credits	:	12.0
Total Lecture Hours	:	45	CIE Marks	:	50
Total Studio Hours	:	90	SEE Marks	:	50
Course Code	:	9ARL1	Exam Mode	:	Viva

Course Objectives: This course will enable students to:
1. Familiarize with various layers of understanding and analysis of urban areas
2. Interpret the role of architecture in urban domain and public realm.
3. Create architectural spaces as extension of private domain in a public building to respond to the urban context.

COURSE OUTLINE:
- The role of urban space as a public realm and the need to create such spaces as extension of private domain in a public building shall be investigated and shall become one of the architectural goals.
- Introduction to Urban analysis – reading urban tissues, analyzing the area, listing the key issues.
- Derive architectural program to fit into the fabric and enhance the character of place.
- Large scale urban insert projects such as transport interchanges, large scale retail areas, entertainment nodes, sports complex, mixed use developments can be handled.
- Incorporating principles of energy conservation, zero energy building, minimum ecological footprint and other concepts to design.

NOTE:
a. Relevant case studies and literature studies can be given by the studio teachers and a report must be compiled by the students.
b. A minimum of two architectural projects must be tackled in the semester.
c. The portfolio covering the above topics shall be presented viva.
d. Projects can be presented using appropriate computer aided tools.
e. Urban design techniques to enhance the character of a place can be explored.

REFERENCE BOOKS:

1	Kevin A Lynch	The image of the city, MIT Press, 1960, ISBN-10: 0262620014, ISBN-13: 978-0262620017
2	Kevin A Lynch	A theory of Good city Form, MIT Press, 1981, 1st Edition, ISBN-10: 0262120852, ISBN-13: 978-0262120852
3	Gordon Cullen	The Concise Townscape, Architectural Press, 1st edition, 1961, ISBN-10: 0750620188, ISBN-13: 978-0750620185
4	Rob Krier	Urban Space, Rizzoli, 1993, ISBN-10: 0847802361, ISBN-13: 978-0847802364
5	Matthew Carmona	Public Places Urban Spaces: The Dimensions of Urban Design, Routledge, 2nd Edition, 2010, ISBN-10: 1856178277, ISBN-13978-1856178273:

Course Outcomes: After the completion of this course, students will be able to:
1. **Explore** the role of architecture in shaping urban fabric.
2. **Conduct** urban analysis to decipher the issues to be addressed through design.
3. **Create** architectural design that fits into a specific urban context.
4. **Apply** principles of energy conservation, zero energy building, minimum ecological footprint, and other concepts to design.
5. **Design** large scale architectural inserts responding to urban context.

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	CO1		3		3									3			
	CO2		3		3	3								3			
	CO3			3		3		3			3			3			
	CO4					3		3						3			
	CO5			3	3									3			

RESEARCH SKILLS AND PROJECT INTRODUCTION

Contact Hours/Week	:	06	Credits	:	6.0
Total Lecture Hours	:	--	SEE Marks	:	50
Total Studio Hours	:	90	CIE marks	:	50
Course Code	:	9ARL2	Exam mode:	:	Viva

Course Objectives: This course will enable students to:
1. Familiarize with research methods in Architecture.
2. Analyze architectural concepts, ideas and systems in a systematic method.
3. Frame strong research questions to which students can answer through their design.
4. Compile the existing knowledge systems about the topic chosen and carve out an architectural. program suitable to address the issues raised.

COURSE OUTLINE:

Pre-Project - The work involves students to discuss with the faculty to identify an area of interest or specific types of Structures. The pre project stage should end with a project proposal giving routine information on site, location, need, broad requirements and scale. In addition, the proposal should clearly indicate the "project question" or an area (or areas) of interest.

Students shall present a seminar on a project topic which would include the following
- Identification of topic/area of research interest
- Statements – aims, objectives
- Scope and feasibility of the project
- Research through Literature Study, precinct study etc
- Identification of categories/ parameters
- A detailed analysis and outcomes/research findings.
- Identify the Architectural proposals for exploration of research findings.

Architectural proposals shall include:
- Precedents of similar project, either actual visit to such projects or through literature reviews.
- Cultural, contextual, historical, technological, programmatic, functional concerns of the project.
- A rhetorical of speculative statement that would be the basis of further investigation. Documentation which is part of this presentation shall be taken as completion of final requirement.

NOTE:
a. The course shall run on a one to one discussion mode.
b. Students shall be allotted guides after finalizing their topic of concern through seminar.
c. Students shall be promoted to document and published quality research papers out of their work done during the semester.

REFERENCE BOOKS:

1.	All references will be project specific and include a wide range of subjects (history, theory, services, material, and construction) from architecture and allied fields addressed through critical papers, essays, documented studies, and books.

2.	Linda Groat and David Wang	Architectural Research Methods, John Wiley Sons, 2nd Edition, 2013 ISBN: 978-0-470-90855-6
3.	Iain Borden and Katerina Rüedi Ray	The Dissertation: A Guide for Architecture Students, Routledge; 3rd edition, ISBN-13: 9780415725361

Course Outcomes: After the completion of this course, students will be able to:

1. **Elucidate** basic architectural research skills.
2. **Appraise** various architectural research methods and methodologies.
3. **Critically** analyze architectural ideas and buildings to develop strong constructs.
4. **Develop** an architectural program as a solution to the issues raised through the literature study.

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	**CO1**		3		3	3								3			
	CO2		3				3							3			
	CO3		3		3			3						3			
	CO4				3								3	3			

URBAN AND REGIONAL PLANNING

Contact Hours/Week	:	03	Credits	:	3.0
Total Lecture Hours	:	45	CIE Marks	:	50
Total Practical Hours	:	--	SEE Marks	:	50
Course Code	:	9AR01	Exam Mode	:	Theory

Course Objectives: This course will enable students to:
1. Acquire knowledge about settlements as an expression of culture, influenced by climate and geographical location.
2. Understand the dynamics of human settlements, both past and present, through various theories and approaches.
3. Get introduced to urbanization and its influence on the transformation of settlements.
4. Identify the relationship between various land uses, density and components of infrastructure and services.
5. Study various methods and techniques of data collection and analysis.
6. Discuss the concept and requirement of regional planning principles.

UNIT I
Introduction **-** Introduction to urban planning and Urban Design and its principles addressing the physical and social challenges that towns, villages, and cities face as they grow or decline. Urban settlements and Rural settlements, Relation between urban and rural settlements, differences, origins, evolution and growth of settlements. Major functions of a city, city-forming and city-serving functions.
History of Planning **-** Characteristics and planning efforts of cities and towns of various historical periods like Egyptian, Roman, Greek, Medieval, Renaissance and City Beautiful
Cities of Indus valley period, Vedic period, Mughal period and British period. **09 Hrs**

UNIT II
Planning Theories - enunciated by Ebenezer Howard, Patrick Geddes, Soria Y Mata, Doxiadis, Le-Corbusier, Clarence Stein, Clarence Arthur Perry, Hilberseimer, Frank Lloyd Wright

Indian city planners: Charles Correa, B V Doshi **09 Hrs**

UNIT III
Land Use Planning **-** Internal spatial structure of cities - concentric zone theory, sector theory, multiple nuclei concept and work-home concept. Land use planning, analysis of land uses in Indian cities. Suburbs, Peri-urban areas.
Components of a settlement - activity pattern and land use, traffic and road network, density of population and population distribution.
Central business district of a city, other business districts, urban nodes, fringe areas and suburbs.
Introduction to environmental factors, terrain and soils, neighbourhood planning, subdivision concepts, mapping and platting, street layout and design, provision of utilities - electricity, gas, water, sanitary sewer and

storm sewers and drainage. Interaction with state and local government, organization of these governments, and general public works activities. **09 Hrs**

UNIT IV
Urbanization and Urban Renewal -Industrial Revolution and its impact on contemporary cities. Urbanization and urban growth, impact on physical growth of urban settlement., Causes and consequences of urban blight and obsolescence, slums and shanties, prevention of formation of slums and squatter settlements.
Urban renewal– Definition, rehabilitation, redevelopment and conservation.
Scales of Planning: Master plan/Comprehensive Development Plan, Area Plan, Regional Plan, Perspective Plan, URDPFI Guidelines; Steps of urban planning.
Introduction to the new concepts of urban development like, Smart cities, Transit-oriented Development (TOD) and Special Economic Zone (SEZ) **09 Hrs**

UNIT V
Planning Techniques - Study and analysis of existing settlements, methodology of conducting diagnostic surveys and studies, land use survey, density survey, FSI survey, traffic surveys and presentation of data. Environmental and management issues. Introduction to GIS analysis methods in urban planning.
Regional Planning - Relation among various settlements of a region, pattern of settlements in a region. Definition of a region, various types of regions, basic principles of regional planning. **09 Hrs**

NOTE:
  a. Seminar with selected readings and presentations to be made individually or in groups. Submission in the form of a Poster and report.

REFERENCE BOOKS:

1.	Gallion and Eisner	The Urban Pattern: city planning and Design, CBS, 2005, 5th edition, ISBN-10: 8123909152, ISBN-13: 978-8123909158
2.	Peter Hall	Urban and Regional Planning, Routledge, 2010, ISBN-10: 1138694835, ISBN-13: 978-1138694835
3.	Lewis Keeble	Principles of planning, Estates Gazette Ltd, 4th edition, 1969, ISBN-10: 0900361050, ISBN-13: 978-0900361050
4.	Spiro Kostof	The city shaped, Bulfinch, 1993, ISBN-10: 0821220160, ISBN-13: 978-0821220160
5.	Mahesh Chand and V K Puri	Regional planning in India, Allied publishers private limited, 2012, ISBN-10: 9788170230588, ISBN-13: 978-8170230588
6.	R P Misra	Regional Planning: Concepts, Techniques, Policies and Case Studies, Concept Publishing Co, 1992, ISBN-10: 8170223040, ISBN-13: 978-8170223047

Course Outcomes: After the completion of this course, students will be able to:

  1. **Summarize** the planning concepts and design principles in Urban, rural and historical settlements.
  2. **Criticize** the planning theories of various planners worldwide.
  3. **Analyze** the sociocultural and spatial structure of Urban context.
  4. **Interpret** the contemporary trends in urbanization and urban redevelopment.
  5. **Recognize** the relevant planning techniques adopted at urban and regional level.

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**
COs	**CO1**	3														3	
	CO2				3											3	
	CO3						3									3	
	CO4							3								3	
	CO5							3								3	

CONSTRUCTION PROJECT MANAGEMENT

Contact Hours/Week	:	03		Credits	:	3.0

Total Lecture Hours	:	45	CIE Marks	:	50
Total Practical Hours	:	--	SEE Marks	:	50
Course Code	:	9AR02	Exam mode	:	Theory

Course Objectives: This course will enable students to:

1. Familiarize with the construction industry and its organizational structure
2. Understand the concepts of project planning and execution techniques needed for building construction projects.
3. Get introduced to various software applications and equipment's in the construction industry.

UNIT I

Introduction to Construction Project management, Principles, objectives and need for construction project management. Types of construction projects, Knowledge (study) areas in a construction project and management, various stakeholders in a construction project.

Construction project organization- Types of construction firms/ companies, Types (or structure) of construction organization, study of organizational structures suitable for building and construction projects, the role of the various members of a typical construction organization (General manager, project manager, engineer, supervisor, etc) qualities of an ideal construction organization, ethics in construction industry.

09 Hrs

UNIT II

Construction planning and scheduling- Project management stages- Overview of Project planning, project scheduling and project controlling, Time, cost and resource management in construction.

Project planning- Life cycle stages in a construction project, Preparation of Work Break Down Structures and Sequencing of Activities (Activity definition, Activity Sequencing, Estimation of Resource Requirements, Time & Cost for an Activity, Development of project Schedule) **09 Hrs**

UNIT III

Construction management techniques- Project scheduling- Preparation of Schedules using Bar chart, Milestone charts, Precedence diagrams.

Networking theories and rules (for CPM and PERT analysis)- Basic concepts (Event, activity, dummy), rules for developing networks, graphical guidelines for network, numbering of events, errors in network, difference between PERT & CPM. **09 Hrs**

UNIT IV

Project Networks- Networking and analysis using CPM, Project networking and cost analysis using CPM, Indirect project cost, direct project cost, slope of the direct cost curve, calculation of total project duration and cost using CPM network diagram.

Project networking and analysis using PERT, calculation of total project duration and cost using PERT network diagram. Brief understanding of about time, cost and resource optimization.

Introduction to software applications in Construction Management – Use of Software applications like MS Project, Primavera etc. for preparing and managing schedules. **09 Hrs**

UNIT V

Construction Equipment- The role of equipment/machinery in construction industry, factors affecting selection of construction machinery, standard versus special equipment, and understanding of the various issues involved in owning, operating and maintaining of construction equipment, economic life of a equipment.

Types of construction equipment: Brief description of earth moving (tractors, excavators, dragline, trenching equipment, etc.,) transporting (various types of trucks), spreading and compacting (motor graders and various types of rollers) and concreting equipment (including concrete mixers, transporting and pumping equipment) **09 Hrs**

NOTE:
a. Use of computers to be encouraged although the same is not for the Examination purposes.
b. Students must be encouraged to study and document case studies of live construction projects.

TEXT BOOKS:

1.	S V Ravindra and K G Krishnamurthy	'Construction and Project Management', CBS PUBLISHERS AND DISTRIBUTORS PVT LTD. 2nd Edition, 2017, ISBN: 978-9386217790
2.	Kumar Neeraj Jha	'Construction Project Management', Pearson Education India; 2nd edition, 2015, ISBN: 978-9332542013

REFERENCE BOOKS:

1.	Dr. B C Punmia and K. K. Khandelwal	Project planning and control with PERT and CPM, Laxmi Publications Pvt Ltd, 4th Edition, July 2023. ISBN (13): 978-8131806982
2.	R L Peurifoy	'Construction Planning, Equipment and Methods' McGraw Hill Education; 7th edition (May 2010), ISBN: 978-0070706996
3.	BIS (Bureau of Indian Standards)	National Building Code of India (NBC 2016-SP-7). Part 7
4.	BIS (Bureau of Indian Standards)	IS 15883 (Part 1): Guidelines for construction project management: Part 1 General 2009.
5.	BIS (Bureau of Indian Standards)	IS 13430: 1992 Code of practice for safety during additional construction and alteration to existing buildings.

Course Outcomes: After the completion of this course, students will be able to:

1. **Differentiate** between various organizational structures suitable for construction industry.
2. **Identify** various stages involved in execution of a construction project work.
3. **Identify** appropriate tools for preparing a project schedule.
4. **Calculate** minimum time duration for a given project.
5. **Identify** various equipment used in construction for appropriate work.

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	CO1	1								2		3			2		
	CO2	2										3			3		
	CO3					3						2			3		
	CO4					3									3		
	CO5											3			2		

ELECTIVE - III

Contact Hours/Week	:	02	Credits	:	2.0
Total Lecture Hours	:	-	CIE Marks	:	50
Total Studio Hours	:	30	SEE Marks	:	50
Course Code	:	9ARE	Exam Mode	:	Term Work

9ARE1: Architectural Conservation

Course Objectives: This course will enable students to:
1. Get introduced to the various aspects of Heritage and its conservation
2. Realize the importance of heritage documentation, consolidation and analysis of data
3. Understand various Heritage management systems and integrated conservation approach

COURSE OUTLINE:

This elective is to introduce students to understand Heritage and the need for conservation of historical structures. The students shall understand the process to be followed for conserving any heritage structures, the conventions and charters which defines the guidelines nationally and internationally will for responsible protection of heritage.

9ARE2: Bio-Mimicry

Course Objectives: This course will enable students to:
1. Understand the concept of 'Bio-mimicry' in architecture.
2. Reconnect with nature: learning to observe nature by function.
3. Explore how biology can be integrated with nature inspired design.
4. Examine how 'bio-mimicry approach' can influence sustainable designs and innovations.

COURSE OUTLINE:

This elective is to introduce students to understand Bio-mimicry and explore the biological component that can influence the design approach. Application of nature-inspired approaches from historical to contemporary architecture and in sustainable practices.

9ARE3: Geographic Information System

Course Objectives: This course will enable students to:
1. Get introduced to the GIS applications for architects.
2. Widen the scope of analysis using technological tools.

COURSE OUTLINE:

The objective is to study the tools and acquire skills to analyze spatial data and solve complex problems related to geography, urban planning, environmental science, and many other fields. GIS allows students to visualize data on maps, helping them understand spatial relationships and patterns that are not easily apparent in tabular data. This spatial analysis capability is crucial for making informed decisions in areas such as land use planning, natural resource management, and disaster response. The imparted knowledge from this tool will equip students to carry out their Architectural Design Project in a much larger scope.

Course Outcomes: After completion of course, Students would be able to:

1. **Apply** desired knowledge and skill in a particular domain of Architecture. (PO1)
2. **Analyse** the processes required for the particular subject. (PO1)
3. **Develop** an expertise in the chosen field for career enhancement. (PO1)

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	**CO1**	3														3	
	CO2	3														3	
	CO3	3														3	

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SCHOOL OF ARCHITECTURE

DETAILED SYLLABUS FOR
TENTH SEMESTER
B. ARCHITECTURE

ARCHITECTURAL DESIGN PROJECT

Contact Hours/Week	:	18	Credits	:	18
Total Lecture Hours	:	--	SEE Marks	:	50
Total Studio Hours	:	135	CIE marks	:	50
Course Code	:	10ADP	Exam mode:	:	Viva

Course Objectives: This course will enable students to:

1. Enhance their ability to comprehend the nature of the architectural problem
2. Prepare a brief or program which can set the framework for the design solution
3. Propose appropriate solutions to the issues raised through architectural design.
4. Detail the architectural systems and facilities according to the objectives of the project

COURSE OUTLINE:

Architectural Design projects can be of any scale and size (in terms of built areas) as long as the student demonstrates the required rigor and depth to merit consideration as a final project. It is expected that all genres of projects (study or design) would end with a design solution; in fact, all projects should be grounded in some critical inquiry.

The stages can be fine-tuned depending on the resources. This project is expected to be run as a studio with individual guidance under a project coordinator and assisted by guides.

1. Project seminar – The student shall present a seminar on the project topic which would include the following;

i. Precedents of similar projects, either actual visits to such projects or through literature reviews.

ii. Cultural, contextual, historical, technological, and programmatic concerns of the project.

iii. Prevalent or historical models of an architectural approach to such projects and a critique of such models and

iv. A rhetorical or speculative statement that would be the basis of further investigation. (For example, Architecture in the information age: Design of libraries in the new virtual reality regime). Documentation that is a part of this presentation shall be taken as completion of the "case study" part of the final requirement

2. Mid Reviews – There shall be a review to clarify the conceptual statements and assumptions of the students. Students shall present a clearly articulated response to context, program, and users. The conceptual framework and preliminary architectural scheme shall be the end products of this stage.

3. Final Review – Final review should consist of all the works that would be presented at the viva.

NOTE:

a. Completion of Research skills and project introduction (IX Sem) is mandatory to carry Architectural Design Project.
b. The final output shall include a report, all drawings, study models, and a presentation model.
c. The report in the printed form shall discuss the program, site- analysis, literature review, case studies, design criteria, concept, and detailed design.
d. Two copies of the reports shall be submitted along with drawings and models.
e. At the time of the Viva examination, the student shall show the jurors the portfolio containing the evolution of his/her design from the beginning to the final output.
f. All the drawings and reports shall be certified by the Head of the Department as bonafide work carried out by the student during the semester.

REFERENCE BOOKS:

1.	All references will be project specific and include a wide range of subjects (history, theory, services, material, and construction) from architecture and allied fields addressed through critical papers, essays, documented studies, and books.

Course Outcomes: After the completion of this course, students will be able to:

1. **Illustrate** advanced-level design ability to convert the brief set forth earlier into a speculative proposition of design. (PO2, PO4)
2. **Explore** research-based solutions to address an architectural issue/ problem. (PO2, PO3, PO4, PO5)
3. **Develop** appropriate design solutions to address socio-cultural, legal, sustainable, and safety aspects. (PO3, PO6, PO7)
4. **Design and detail** an architectural project of higher complexity with advanced digital tools to analyze, create, and present design idea. (PO3, PO5, PO9, PO10)
5. **Develop** an instinct towards identifying area of concern/ domain to indulge in lifelong learning. (PO12)

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	**CO1**		3		3										3			
	CO2		3	3	3	3									3			
	CO3			3			3	3							3			
	CO4			3		3				3	3				3			
	CO5												3	3				

ELECTIVE - IV

Contact Hours/Week	:	02		Credits	:	2.0
Total Lecture Hours	:	-		CIE Marks	:	50
Total Studio Hours	:	30		SEE Marks	:	50
Course Code	:	10ARE		Exam Mode	:	Term Work

10ARE-2: Disaster management

Course Objectives: This course will enable students to:

1. Familiarize students with the disaster management cycle
2. Create awareness about natural disasters and factors that cause them
3. Foster knowledge about strategies for disaster prevention and management
4. Familiarize students with various disaster resistant construction techniques according to the type of disaster or natural hazard

COURSE OUTLINE:

Introduction to disaster management, understanding terminologies like hazards, risk and vulnerability, Types of disasters like Earthquake, Tsunami, Cyclone, Flood and Landslide, their causes, adverse effects, distribution patterns, Disaster management cycle, Indian scenario. Case studies on above mentioned disasters (National and international), inferences derived from such case studies and actions taken in post disaster scenarios. Guidelines for management of Floods, River Erosion, Cyclones Tsunami, Landslides & Avalanches, Forest Fires. Disaster Management Act, Guidelines, NDMA (National Disaster Management Authority). Vulnerability Assessment & Warning systems for above said disaster types, Programmes and strategies for disaster reduction, Pre disaster, emergency, transition, and recovery. Disaster management plan, National and state crisis management groups/committees.

Risk reduction measures through land use control, site planning and land management, design and construction of structures for above mentioned disasters.

10ARE-3: Rural Planning & Infrastructure

Course Objectives: This course will enable students to:

1. Understand settlements as an expression of culture, influenced by climate and geographic location.
2. Understand the planning process, and various types of plans, especially in India.
3. Study various methods and techniques of data collection and analysis.
4. Understand the relationship between various land uses and density.
5. Understand the various components of infrastructure and services.
6. Enable students to inter relate various typologies of land uses to related infrastructure and services.

COURSE OUTLINE:

This elective is to introduce students to understand the difference between Urban and Rural settlements and to understand the rural physical setting wrt social and economical aspects. The students shall understand the process of documenting the rural settlement, its physical setting, Occupation structure and living environment. The infrastructural requirements and incentives by government towards rural development will be studied.

10ARE-4: Architecture Journalism

Course Objectives: This course will enable students to:

1. Introduce writing on architecture as a method to study and interpret the built environment through analysis, criticism and review.
2. Equip the students with the fundamentals, relevant skills and techniques of various genres of architectural writing and journalism.

COURSE OUTLINE:

Overview and objectives of role of writing and journalism in architecture; Writing and Journalism skills: research, writing, editing and criticism. Introduction, scope and constraints of print, audio and visual architectural journalism in the context of newspapers, radio, film, and television. Roles of an architectural journalist as a reporter, reviewer, cartoonist, interviewer, feature writer and specialist writer.

Techniques and methods of expressing an architectural narrative or description through forms of creative writings such as fiction, poetry, travel writing, blogging which are based on architecture or employ architecture as a context.

Techniques and methods of researching, analyzing and critiquing architecture through forms of analytical writings such as research papers, journal writings and critical essays.

Techniques and methods of recording, authenticating and examining architecture through documentation and technical writings.

Role of an architect as a writer and journalist in scripting the narrative of architecture; Topics relevant and needed in an architectural journals and current issues; Mass Media and Public Opinion – critique of architecture through new age journalism and technology; Issues of code of ethics, copyright, royalty, publishing rights and policies; Citation and plagiarism.

Course Outcomes: After the completion of this course, students will be able to:

1. **Apply** desired knowledge and skill in a particular domain of Architecture. (PO1)
2. **Analyze** the processes required for the particular subject. (PO1)
3. **Develop** an expertise in the chosen field for career enhancement. (PO1)

Mapping of Course Outcomes (COs) to Program Specific Outcomes (PSOs)

		POs												PSOs			
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
COs	CO1	3														3	
	CO2	3														3	
	CO3	3														3	