FIFTH YEAR TENTH SEMESTER

1. THESIS PROJECT 211011

. No.	Subject Code	Subject Name	Category	Maximum Marks Allotted							Total Marks	CT HRS	Contact Periods per week			Total Credits	Mode of Teaching (Offline/ Online)	Mode of Exam
				Theory Slot				Practical Slot					L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation									
				End Sem.	Proficiency in subject/ course	Mid Sem.	Quiz/ Assignment /Sessional		Lab work & Sessional	Skill based mini project								
1.	211011	Thesis Project	DC-19	-	-	-	-	250	400	-	650	-	-	-	12*(1.5)	**18**	Blended **(14/4)	SO

Refer Thesis Manual of department of Architecture

2. PROFESSIONAL DEVELOPMENT 211012

. No.	Subject Code	Subject Name	Category	Maximum Marks Allotted							Total Marks	CT HRS	Contact Periods per week			Total Credits	Mode of Teaching (Offline/ Online)	Mode of Exam
				Theory Slot				Practical Slot					L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation									
				End Sem.	Proficiency in subject/ course	Mid Sem.	Quiz/ Assignment /Sessional		Lab work & Sessional	Skill based mini project								
1.	211012	Professional Development	PAEC-7	-	-	-	400	300	-	-	700	-	-	-	40	**20**	Off-campus	SO

3. Elective VIII

. No.	Subject Code	Subject Name	Category	Maximum Marks Allotted							Total Marks	CT HRS	Contact Periods per week			Total Credits	Mode of Teaching (Offline/ Online)	Mode of Exam
				Theory Slot				Practical Slot					L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam	Continuous Evaluation									
				End Sem.	Proficiency in subject/ course	Mid Sem.	Quiz/ Assignment /Sessional		Lab work & Sessional	Skill based mini project								
3.	-	ELECTIVE - VIII	DE-8	50	-	30	20	-	-	-	100	3	2	1	-	**3**	Blended * (2/1)	PP

(i) Adaptive Reuse and Sustainable Retrofitting (211021)

Objective - Students will acquire a comprehensive understanding of sustainable design principles, practical skills in retrofitting existing structures, and the ability to creatively adapt spaces, preparing them for careers in architecture, urban design, and conservation.

Unit 1: Introduction to Adaptive Reuse

Introduction to adaptive reuse in architecture. Principles and benefits of adaptive reuse in sustainable design, Understanding Adaptive Reuse.

Unit 2: Assessment and Site Analysis for Retrofitting

Methods for site evaluation and analysis for retrofitting projects. Identification of opportunities and constraints in retrofitting existing structures. Site Assessment for Retrofitting.

Unit 3: Sustainable Retrofitting Techniques

Strategies and technologies for energy-efficient retrofitting. Sustainable materials and innovative technologies in retrofitting projects. Techniques for Sustainable Retrofitting.

Unit 4: Design Considerations in Adaptive Reuse

Design considerations and challenges in adapting existing structures. Balancing preservation with modern functionality in adaptive reuse projects. Design Principles in Adaptive Reuse.

Unit 5: Case Studies and Project Implementation

Analysis of successful adaptive reuse and retrofitting projects. Development and presentation of a sustainable retrofitting proposal. Case Studies and Project Implementation.

COs & LOs for Adaptive Reuse and Sustainable Retrofitting **Overall Course Outcome:** The course aims to obtain knowledge of fundamental concepts and theories of Adaptive reuse of old or heritage buildings and Sustainable retrofitting interventions which can be applied in historic buildings. Implement sustainable retrofitting strategies to transform existing structures into environmentally efficient spaces.			
CO1	Students will comprehend the principles and significance of adaptive reuse in sustainable architectural design.	LO1	**Recall** and explain the concept and benefits of adaptive reuse in architecture.
		LO2	**Understand** the significance of adaptive reuse in achieving sustainability in architectural design.
		LO3	**Apply** principles of adaptive reuse to analyze potential opportunities in existing structures.
		LO4	**Analyze** and compare the environmental benefits of adaptive reuse compared to new construction.
		LO5	**Create** preliminary design concepts demonstrating the potential for adaptive reuse in a given context.
CO2	Students will be able to analyze and assess existing structures for retrofitting opportunities, identifying constraints and possibilities.	LO1	**Recall** and list methods used for site evaluation and analysis in retrofitting projects.
		LO2	**Understand** the importance of thorough site assessment in identifying opportunities for retrofitting.
		LO3	**Apply** site analysis techniques to evaluate a given structure for potential retrofitting opportunities.
		LO4	**Analyze** the constraints and challenges associated with retrofitting existing structures.
		LO5	**Create** a site assessment report highlighting opportunities and constraints for retrofitting.
CO3	Students will evaluate and apply sustainable retrofitting techniques and technologies for energy-efficient design solutions.	LO1	**Recall** and describe sustainable retrofitting techniques and technologies.
		LO2	**Understand** the principles behind energy-efficient retrofitting strategies.
		LO3	**Apply** sustainable retrofitting techniques to propose energy-efficient design solutions.
		LO4	**Analyze** the effectiveness of different sustainable materials and technologies in retrofitting projects.
		LO5	**Create** a sustainable retrofitting plan integrating innovative technologies and materials.

CO4	Students will demonstrate the ability to integrate preservation principles with modern functionality in design considerations for adaptive reuse.	LO1	**Recall** and list design considerations and challenges in adapting existing structures.
		LO2	**Understand** the balance between preservation and modern functionality in adaptive reuse projects.
		LO3	**Apply** preservation principles to propose design solutions for adaptive reuse projects.
		LO4	**Analyze** the architectural integrity of existing structures and its implications in adaptive reuse.
		LO5	**Create** design concepts that harmonize preservation with contemporary design needs.
CO5	Students will present and propose a sustainable retrofitting project, synthesizing the principles learned into a comprehensive proposal.	LO1	**Recall** and summarize key features of successful adaptive reuse and retrofitting projects.
		LO2	**Understand** the factors contributing to the success of sustainable retrofitting projects.
		LO3	**Apply** lessons from case studies to develop a sustainable retrofitting proposal.
		LO4	**Analyze** and evaluate the environmental and economic impacts of implemented retrofitting projects.
		LO5	**Create** and present a comprehensive sustainable retrofitting proposal for an existing structure.

References:

1. Canter, D., & Warren, P. H. (2017). *Sustainable Urban Development Reader*. Routledge.
2. Heerwagen, J., & Loveland, J. (2014). *Adaptive Strategies for Waterfront Structures: Buildings, Infrastructure, and Urban Sites*. W. W. Norton & Company.
3. Roodman, D. M. (2017). *Sustainable Retrofit and Facilities Management*. Routledge.
4. Schmidt, M., & Zundel, M. (2018). *Adaptive Reuse: Extending the Lives of Buildings*. Birkhäuser.
5. Smith, P. A. (2018). *Sustainable Retrofitting of Commercial Buildings: Cool Climates*. Routledge.
6. Steemers, K., & Yannas, S. (2012). *Architecture and Environmental Engineering: Approaches for Energy and Environmental Studies in Building Design*. Routledge.
7. Chatterjee, P. K., & Dutta, K. (2018). *Sustainable Building Design and Construction: Case Studies of LEED*. Springer India.

(ii) Cultural Architecture and Identity (211022)

Objective - Students will acquire a comprehensive understanding of Cultural Identity and importance of Architecture and analyze the influence of cultural identity on architectural forms and styles. also they will be able to apply cultural elements creatively in architectural design to reflect and respect diverse cultural identities.

Unit 1: Understanding Cultural Identity in Architecture

Introduction to Cultural Identity. Exploration of cultural identity and its significance in architectural design. Influence of cultural factors on architectural styles and elements

Unit 2: Vernacular Architecture and Indigenous Building Techniques

Study of Vernacular Architecture. Examination of indigenous building techniques and materials. Analysis of how local culture influences architectural forms and functions

Unit 3: Preservation and Conservation of Cultural Heritage

Heritage Conservation Principles. Principles and methodologies of preserving cultural heritage sites and structures. Importance of adaptive reuse and restoration in maintaining cultural identity

Unit 4: Modern Architecture and Cultural Context

Modern Architectural Movements and Cultural Context. Examination of how modern architectural movements integrate or contrast with cultural identity. Analysis of contemporary design's role in preserving or altering cultural identity

Unit 5: Cultural Expression through Contemporary Architecture

Contemporary Cultural Architecture. Exploration of contemporary architectural expressions reflecting cultural identity. Examination of diverse approaches to integrating cultural elements in modern designs

COs & LOs for Cultural Architecture and Identity **Overall Course Outcome:** The course aims to obtain knowledge of Integrating diverse cultural elements into architectural designs, preserving and reflecting cultural identities.			
CO1	Students will **comprehend** the significance of cultural identity in architectural design, recognizing its influence on architectural styles and elements.	LO1	**Recall** and describe the significance of cultural identity in architectural design.
		LO2	**Understand** how cultural factors influence architectural styles and elements.
		LO3	**Apply** knowledge of cultural identity to analyze architectural designs in different cultural contexts.
		LO4	**Analyze** and compare the influence of culture on various architectural styles.
		LO5	**Develop** design concepts that integrate cultural identity elements into architectural projects.
CO2	Students will **analyze and differentiate** indigenous building techniques and materials, understanding their role in shaping architectural forms.	LO1	**Recall** and list various indigenous building techniques and materials used in vernacular architecture.
		LO2	**Understand** the relationship between local culture and architectural forms in vernacular architecture.
		LO3	**Apply** knowledge of indigenous building techniques to propose sustainable design solutions for contemporary architectural projects.
		LO4	**Analyze** and compare the influences of different cultural elements on the design and construction of vernacular buildings.
		LO5	**Create** design proposals that incorporate indigenous building techniques, respecting and reflecting cultural traditions.
CO3	Students will **evaluate and apply** principles and methodologies of preserving cultural heritage, advocating for adaptive reuse.	LO1	**Recall** and summarize the principles of preserving cultural heritage sites and structures.
		LO2	**Understand** the importance of adaptive reuse and restoration in maintaining cultural identity in architectural conservation.
		LO3	**Apply** preservation methodologies to propose restoration strategies for a specific cultural heritage site.
		LO4	**Analyze** the ethical dilemmas and challenges in balancing modern needs with preserving cultural heritage in architecture.
		LO5	**Develop** preservation plans that integrate modern functionality while respecting the cultural significance of heritage structures.
CO4	Students will **assess and critique** the relationship between modern architectural movements and cultural context, analyzing their impact on cultural identity.	LO1	**Recall** and identify key modern architectural movements and their relation to cultural contexts.
		LO2	**Understand** how cultural contexts influence the evolution of architectural styles in modernity.
		LO3	**Apply** knowledge of modern architectural movements to analyze their impact on preserving or altering cultural identity.
		LO4	**Analyze** and compare the ways modern architecture reflects or challenges cultural norms and identities.
		LO5	**Create** design proposals that harmoniously blend modern architectural elements with cultural context.
CO5	Students will demonstrate the ability to **integrate** cultural elements into	LO1	**Recall** and list contemporary architectural expressions reflecting cultural identity.

	contemporary architectural designs, reflecting an understanding of diverse cultural expressions in modern architecture.	LO2	**Understand** the diverse approaches used to integrate cultural elements into modern architectural designs.
		LO3	**Apply** various design approaches to propose innovative architectural solutions rooted in cultural identity.
		LO4	**Analyze** and critique the effectiveness of different strategies for integrating cultural elements in contemporary designs.
		LO5	**Create** original design concepts that authentically represent cultural identity in contemporary architectural projects.

References:

- Ching, F. D. K. (2015). *Architecture: Form, Space, and Order*. John Wiley & Sons.
- Kostof, S. (1999). *The City Shaped: Urban Patterns and Meanings Through History*. Bulfinch Press.
- Kubler, G. (1982). *The Shape of Time: Remarks on the History of Things*. Yale University Press.
- Morris, A. E. J. (1995). *History of Urban Form: Before the Industrial Revolutions*. Wiley-Blackwell.
- Pile, J. F. (2018). *A History of Interior Design*. Laurence King Publishing.
- Trachtenberg, M., & Hyman, I. (2002). *Architecture: From Prehistory to Postmodernity*. Prentice Hall.
- Alsayyad, N., & Mejia-Hernandez, J. (Eds.). (2011). *Transnationalism in Architecture*. Routledge India.

(iii) Social Impact Design and Community Engagement (211023)

Objective - Students will acquire a comprehensive understanding of Social Impact Design and analyze the influence of community on overall design. Also they will be able to apply Community Engagement creatively in urban design to reflect and respect diverse communities.

Unit 1: Introduction to Social Impact Design

Understanding Social Impact Design. Definition and significance of social impact design in architecture. Historical context and evolution of community-engaged design practices. Case studies showcasing successful social impact design projects

Unit 2: Community Engagement Methods and Tools

Methods for Community Engagement. Techniques for effective community engagement in design processes. Participatory design methods and tools for involving stakeholders. Ethical considerations and challenges in community-engaged design

Unit 3: Social Impact Assessment in Design

Assessing Social Impact in Architecture. Principles of assessing social impact in architectural projects. Tools and frameworks for evaluating the social outcomes of designs. Case studies illustrating successful social impact assessments

Unit 4: Designing for Social Change

Design Strategies for Social Change. Strategies for integrating community needs into design solutions. Implementing inclusive design principles for diverse communities. Addressing social inequalities through architectural interventions

Unit 5: Implementation and Project Showcase

Implementation of Social Impact Design. Project planning and execution for social impact initiatives. Showcasing successful projects and their impact on communities. Reflection on the role of architects in fostering social change through design

COs & LOs for Social Impact Design and Community Engagement Overall Course Outcome: The course aims to obtain knowledge of Developing inclusive design strategies that positively impact communities through collaborative engagement and ethical practices.			
CO1	Students will be able to critically **appraise and defend** the significance of social impact design in architecture, evaluating its historical context and evolution.	LO1	**Recall** and summarize key historical milestones and influential movements in social impact design within architecture.
		LO2	**Explain** the evolution of social impact design, analyzing its shifts and influences over different architectural eras.
		LO3	**Apply** historical knowledge to demonstrate how social impact design has evolved and contributed to addressing specific societal challenges.
		LO4	**Break down** and categorize the elements that have led to the success or failure of significant social impact design initiatives.
		LO5	**Develop** a persuasive argument defending the importance of social impact design in modern architecture, integrating historical evidence to support the argument.
CO2	Students will be able to **synthesize and design** comprehensive community engagement strategies using participatory methods and ethical considerations, ensuring effective collaboration.	LO1	**Memorize** ethical considerations and principles that guide architects in engaging with diverse stakeholders.
		LO2	**Describe** the impact of different participatory methods on stakeholder involvement and collaboration in architectural projects.
		LO3	**Apply** various participatory methods to create a community engagement plan for a hypothetical architectural project.
		LO4	**Analyze** and evaluate the effectiveness of different community engagement methods in achieving stakeholder collaboration and inclusivity.
		LO5	**Design** a comprehensive and adaptable community engagement strategy integrating multiple participatory methods for a real-world architectural project.
CO3	Students will be able to **evaluate and appraise** the social impact of architectural designs using appropriate assessment tools and frameworks.	LO1	**Recall** and list different assessment tools commonly used to measure social impact in architectural designs.
		LO2	**Explain** the significance of assessing social impact in architectural designs, elucidating its importance in addressing community needs.
		LO3	**Apply** different assessment tools to evaluate the potential social impact of proposed architectural designs.
		LO4	**Analyze** and interpret the data collected from social impact assessments to determine the potential effects of design interventions.
		LO5	**Develop** a comprehensive social impact assessment plan for a proposed architectural design project, integrating multiple assessment tools and frameworks.
CO4	Students will be able to **create and propose** innovative architectural design strategies that address social inequalities, utilizing inclusive design principles.	LO1	**Recall** and list key principles of inclusive design relevant to addressing social inequalities in architectural projects.
		LO2	**Explain** the relationship between architectural design and social inequalities, demonstrating how design interventions can address these disparities.
		LO3	**Apply** inclusive design principles to propose architectural solutions that aim to address specific social inequalities within communities.
		LO4	**Analyze** and evaluate the potential impact of proposed architectural designs on reducing social inequalities within communities.
		LO5	**Create** innovative architectural design proposals that prioritize addressing social inequalities, integrating inclusive design principles and considering diverse community needs.
CO5	Students will be able to **demonstrate, analyze, and present** successful architectural projects	LO1	**Recall** and list key elements of successful architectural projects that positively impact communities.
		LO2	**Explain** the role of architects in fostering social change through design interventions, illustrating their impact on communities.

	showcasing their positive impact on communities.	LO3	**Apply** reflective practices to analyze the impact of architectural projects on communities, considering diverse perspectives and stakeholders.
		LO4	**Analyze** and evaluate the long-term effects of successful architectural projects on the social fabric and well-being of communities.
		LO5	**Create** compelling presentations showcasing the positive impact of architectural projects on communities, incorporating diverse perspectives and stakeholders' feedback.

References:

1. Baer, W. C., & Dirks, S. (2016). *Design for Good: A New Era of Architecture for Everyone*. Island Press.
2. Brown, T. (2009). *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. HarperCollins.
3. Dubberly, H., & Pangaro, P. (2009). *What is interaction? Are there different types?*.
4. Farrelly, L. (2014). *The Handbook of Design for Sustainability*. Bloomsbury Publishing.
5. Kolarevic, B. (Ed.). (2008). *Design Computing and Cognition '08: Proceedings of the Third International Conference on Design Computing and Cognition*. Springer Science & Business Media.
6. Mankad, S., & Gaucherel, A. (Eds.). (2019). *Sustainability and Social Responsibility in Higher Education: Perspectives and Practices in India*. Springer.
7. Mehta, V. (2019). *Architectural Identity in India: Through Time and Beyond*. Niyogi Books.