ANNA UNIVERSITY, CHENNAI

POSTGRADUATE CURRICULUM (NON.AUTONOMOUS AFFILIATED INSTITUTIONS)

Programme: M. Arch. **(**Conservation**)** **Regulations:** 2025

Abbreviations:

Category

PC – Professional Core

PE – Professional Elective

BS & AE – Basic Sciences & Applied Engineering

PAE – Professional Ability Enhancement

SD – Skill Development

SL – Self Learning

HUM – Humanities (including Languages and others)

Course Type

S - Studio

T – Theory

TS – Theory cum Studio

IT – Internship Training

LIT – Laboratory Integrated Theory

TCP – Total Contact Period(s)

L – Lecture P – Practical

T – Tutorials S - Studio

Semester I

S. No.	Course Code	Course Title	Type	Periods per week			TCP	Credits	Category
				L	T	P/S			
1.	MH25C01	Research Methodologies for Built Environment	T	3	0	0	3	3	PC
2.	CO25101	Introduction to Architectural Conservation	T	3	0	0	3	3	PC
3.	CO25102	Impact of Society and Culture on Built Heritage	T	3	0	0	3	3	PC
4.	CO25103	Traditional Knowledge System	T	3	0	0	3	3	PC
5.	CO25104	Documentation Techniques and Information Data Management	TS	1	0	3	4	4	PAEC
6.	CO25105	Conservation Studio I	S	0	0	10	10	10	PC
Total Credits							**26**	**26**	

Semester II (Prerequisite- Pass in Conservation Studio I)

S. No.	Course Code	Course Title	Type	Periods per week			TCP	Credits	Category
				L	T	P/S			
1.		Materials and Structural Systems	T	3	0	0	3	3	PC
2.		Strengthening and Retrofitting Historic Structures	T	3	0	0	3	3	PC
3.		Project Management in Conservation	T	3	0	0	3	3	PC
4.		Geographical Information Systems for Built Environment	TS	1	0	3	4	4	PAEC
5.		Professional Elective I	---	X	X	X	3	3	PE
6.		Industry Oriented Course	---	X	X	X	---	1	SD
7.		Conservation Studio II	S	0	0	10	10	10	PC
Total Credits							**26**	**27**	

Semester III (Prerequisite- Pass in Conservation Studio II)

S. No.	Course Code	Course Title	Type	Periods per week			TCP	Credits	Category
				L	T	P/S			
1.		Services in Historic Buildings	T	3	0	0	3	3	PC
2.		Conservation Legislation	T	3	0	0	3	3	PC
3.		Dissertation	T	0	0	4	4	4	PC
4.		Conservation Studio III	S	0	0	10	10	10	PC
5.		Professional Elective II	---	X	X	X	3	3	PE
6.		Professional Elective III	---	X	X	X	3	3	PE
7.		Internship Training	---	---	--	---	---	2	SD
Total Credits							**26**	**28**	

Semester IV (Prerequisite- Pass in Conservation Studio III)

S. No.	Course Code	Course Title	Type	Periods per week			TCP	Credits	Category
				L	T	P/S			
1.		Thesis Project	S	0	0	20	20	20	SD
2.		Professional Elective IV	---	X	X	X	3	3	PE
Total Credit							**23**	**23**	

Professional Elective Courses (PEC)

S. No.	Course Code	Course Title	Periods per week			Total Contact Periods	Credits
			L	T	P/S		
1.		Cultural Anthropology and Sociology	3	0	0	3	3
2.		Shared Built Heritage	3	0	0	3	3
3.		Natural and Designed Landscape	3	0	0	3	3
4.		Cultural Landscape	1	0	2	3	3
5.		Museum Design and Management	1	0	2	3	3
6.		History of Western Architectural Conservation	3	0	0	3	3
7.		Soft Skills	2	0	1	3	3
8.		Sacred Landscapes	3	0	0	3	3
9.		World Heritage Sites	3	0	0	3	3
10.		Sustainability and Conservation	3	0	0	3	3
11.		Landscape Conservation	3	0	0	3	3
12.		Urban Conservation and Practice	3	0	0	3	3
13.		Sustainable Tourism and Visitor Management	3	0	0	3	3
14.		Psychology of Learning and Development	3	0	0	3	3
15.		Heritage Impact Assessment	3	0	0	3	3
16.		Disaster Management of Cultural Resources	3	0	0	3	3
17.		Economics of Preservation and Heritage	3	0	0	3	3
18.		Theory of Architectural Education	3	0	0	3	3

Semester I

MH25C01	Research Methodologies for Built Environment	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To give introduction to the importance of critical inquiry as a way of gaining knowledge and adding to it through research.
- To give exposure to the various forms of research and research methodologies/ processes.
- To understand research in the specific domain of built environment research.

Introduction: Basic research issues and concepts. Orientation to research process. Types of research: historical, qualitative, co-relational, experimental, simulation and modelling, logical argumentation, case study and mixed methods. Illustration using research samples including research in the domain of built environment.

Research Process: Elements of Research process: finding a topic, writing an introduction, stating a purpose of study, identifying key research questions and hypotheses, reviewing literature, using theory, defining, delimiting and stating the significance of the study, advanced methods and procedures for data collection and analysis. Illustration using research samples including research in the domain of built environment.

Researching and Data Collection: Library and archives. Internet: New information and the role of internet. Finding and evaluating sources. Misuse. Test for reliability. Ethics.

Methods of data collection- Primary sources: observation and recording, interviews structured and unstructured, questionnaire, open ended and close ended questions and the advantages, sampling. Collecting data from secondary sources. Socio-economic research techniques such as focused group discussions, participant observation.

Methods and Tools in Urban Research: Space syntax: key concepts of space syntax and their development, spatial properties - connectivity, integration, intelligibility, etc. - of the built environment and explore their impact on user behavior, visual field/isovist characteristics - compactness, occlusivity, clustering coefficient, etc. - of the built environment and explore their impact on user behavior, analyse architectural and urban layouts using space syntax methods - convex analysis, justified graph, axial analysis and visibility graph analysis. Use of excel software for analyzing data; applications of features of excel- basic and selected advanced features. Data analysis: Advanced Excel, SPSS. Impact of ‘Big Data’ or statistics on interpretation of urban phenomena

Report Writing & Case Studies: Research writing in general and its components. Developing the outline, referencing, writing the bibliography, presentation, etc,. Case studies of competent research, from project inception to completion with a focus on research in the domain of built environment. Review of research publications.

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.

One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Groat, L., & Wang, D. (2013). *Architectural research methods* (2nd ed.). John Wiley & Sons Inc.
2. Booth, W. C., Williams, J. M., & Colomb, G. G. (2008). *The craft of research* (3rd ed.). University of Chicago Press.
3. Borden, I., & Ruedi, K. (2005). *The dissertation: An architecture student's handbook* (2nd ed.). Architectural Press.
4. Kumar, R. (2014). *Research methodology: A step-by-step guide for beginners* (4th ed.). Sage Publications.
5. Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage Publications.
6. Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research* (1st ed.). Sage Publications.
7. Ward, K. (2013). *Researching the city*. Sage Publications Ltd.
8. Gaur, A. S. (2011). *Statistical methods for practice and research: A guide to data analysis using SPSS*. Response Books.

E-resources:

1. Bell, J., & Waters, S. (2018). Doing your research project: A guide for first-time researchers (7th ed.). McGraw-Hill Education. ISBN 9780335243396
2. Sheppard, V. (2020). Research methods for the social sciences: An introduction. BCcampus & Open Textbook Library. https://open.umn.edu/opentextbooks/textbooks/1589
3. Schulman, J. S. (2024, March 28). An exploration of research methods (ResearchMethod.net). Manteio Company.https://researchmethod.net.
4. Phelps, J. (2021). Engaging Research Communities in Writing Studies: Ethics, Public Policy, and Research Design (1st ed.). Routledge. https://doi.org/10.4324/9781003082002
5. Joore, P., Stompff, G., & van den Eijnde, J. (Eds.). (2022). Applied Design Research: A Mosaic of 22 Examples, Experiences and Interpretations Focussing on Bridging the Gap between Practice and Academics (1st ed.). CRC Press. https://doi.org/10.1201/9781003265924

	Description of CO	PO Mapping
CO1	Identify, decipher and interpret issues relating to architecture based on research enquiry methods.	PO1 (3) PO2 (2)
CO2	Exemplify different methods of conducting research and research writing	PO1 (3) PO2 (2)
CO3	Interpret specific research related to built environment.	PO1 (3) PO2 (2)

CO25101	Introduction to Architectural Conservation	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To introduce heritage conservation in the Indian context
- To inform about Governmental and Non-Governmental agencies that work towards Conservation at various levels in India.
- To enable students to understand the importance of documentation and assessing architectural character.
- To enable students to understand the relationship between craft and conservation
- To create awareness of the various charters and development of UNESCO as the global agency and its role in the field of conservation in India.

Introduction to Conservation: Understanding Heritage, Types of Heritage, Heritage conservation, Need, Debate and purpose. Defining Preservation, Restoration, Conservation and Adaptive reuse. Distinction between Architectural and Urban Conservation, Heritage conservation in India, issues & challenges

Theory of Conservation in India: Listing & Documentation of Built Heritage in India - Assessing architectural character, the concept of Jeernodharana, historic structure report guidelines, Principles of Conservation, Conservation ethics - Craft & conservation, intangible heritage

Agencies & Policies in Conservation: Establishment, goals & objectives of Archaeological Survey of India (ASI) - Role and activities of ASI Role of INTACH – Formation, Scope and Principles – Administrative Form -INTACH Charter Central & State Government policies on heritage Conservation - Legislations and legal interventions in Conservation

Case Studies: Case study of projects (single building) by conservation architects/firms/organizations in India, Select Case Studies of ancient heritage sites in India such as Hampi, Qutub complex, Mahabalipuram, etc.

Role of Unesco in Conservation in India: Birth and formation of UNESCO – Charters of UNESCO - Listing of World Heritage Monuments in India – Conservation Strategies – Case studies

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.
One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Biswas, S. S. (1999). *Protecting the cultural heritage: National legislation and international conventions*. [Call number: 344.094 BIS-P].

2. Pant, D. K. (2012). *Care and administration of heritage monuments in India*. [Call number: 725.940954 PAN-C1784-1904].
3. Bracker, A., & Richmond, A. (Eds.). (n.d.). *Conservation: Principles, dilemmas and uncomfortable truths*. [Call number: 363.69 CON].
4. Cumming, J. (n.d.). *Revealing India's past*. Cosmopublication. ISBN 81-307-0087-5.
5. Glendinning, M. (2013). *The conservation movement: A history of architectural preservation*. Routledge. ISBN 978-0-415-54322-4.
6. Cleere, H. (2009). *Heritage: Approaches to the archaeological comparative study of world truths*. Cambridge University Press. ISBN 9780521243056.

	Description of CO	**PO Mapping**
CO1	Relate to the heritage conservation movement in India	PO3(2), PO4(1) PO5(2)
CO2	Explain about various governmental agencies and their contributions towards conservation.	PO3(2) PO4(1) PO5(2) PO6(1)
CO3	Relate the mind and assess architectural character and importance of documenting heritage	PO1(1) PO3(2) PO4(1) PO5(1)
CO4	Correlate the importance of craft in conservation and importance of craft in community.	PO3(1) PO5(1)
CO5	Build case studies and understand the role of agencies like UNESCO in architectural conservation	PO1(1) PO3(1) PO4(1)

CO25102	Impact of Society and Culture on Built Heritage	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To enable understanding of the scientific approach to cultural studies and cultural theories related to perception and interpretation of built heritage.
- To provide students with various theories of cultural study and discuss various methodologies to study culture
- To enable students to understand the concept of vernacular architecture and various traditional materials associated with them.
- To enable students to develop holistic understanding of conservation by studying the core disciplines of conservation
- To introduce the importance of culture mapping among various social communities of India.

Introduction to History & Social Sciences: Understanding the concept and development of society – Core disciplines including social sciences (Anthropology, Sociology, History, Art-History, etc.), Archaeology, Museology and Planning. Synergies between the core disciplines of society in understanding built heritage.

Study of Culture: Definition of culture - aspects, identity of key factors – theories of cultural study - overlap of culture – Approaches and methodologies of study of culture - interrelation between different cultural parameters

Architecture and Culture: Architecture as a cultural element – concept of vernacular architecture – elements and characters of vernacular architecture – selected study of Chettinad houses – Agraharam dwellings – Havelis - NaluKettu houses – Goan houses etc.

Cultural Study and Conservation: Importance of core disciplines in holistic understanding of conservation - Impacts of core disciplines on Conservation - Understanding various perception and interpretation of heritage - Evolving holistic and integrated habits of thought.

Case Study : Culture mapping and study of practices of selected social communities of India

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.
One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Blistene, B. (2001). *History of 20th-century art*. Flammarion. ISBN 9782080105646.
2. Heath, K. W. (2009). *Vernacular architecture and regional design: Cultural process and environmental response*. [Call number: 720.103 HEA].
3. Sørensen, M. L. S., & Carman, J. (Eds.). (n.d.). *Heritage studies: Methods and approaches*. Routledge. ISBN 9780415431859.

4. Noble, A. G. (n.d.). *Traditional building: A global survey of structural forms and cultural functions*. ISBN 9781890206628.
5. Sengupta, G., & Gangopadhyay, K. (Eds.). (2009). *Archaeology in India: Individuals, ideas and institutions*. [Call number: 934 ARC].
6. Tschumi, B. (1994). *Architecture and disjunction*. MIT Press.

	Description of CO	**PO Mapping**
CO1	Relate to the scientific approach to cultural studies and theories related to	PO3(2) PO4(1) PO5(1)
CO2	Explain about various theories about cultural study and their methodologies.	PO3(1) PO4(1)
CO3	Correlate their mind and assess the importance of vernacular architecture in today's context.	PO1(1) PO3(2) PO4(2) PO5(1) PO6(1)
CO4	Devise the importance of holistic understanding of conservation from a grass root level.	PO1(1) PO3(2) PO6(1)
CO5	Build case studies based on culture mapping across various social communities.	PO3(1) PO5(2) PO6(2)

CO25103	Traditional Knowledge System	L	T	P/S	C
		3	0	0	3

Course Objectives:

- To enable students to understand the concept of traditional knowledge and differentiate between that and formal education.
- To provide students with typologies of architecture, evolution of need-based architecture.
- To enable students to understand the concept of traditional crafts and the importance of craftsmen and materials.
- To enable students to develop an understanding for general planning strategies in ancient cities.
- To introduce the importance of gaining knowledge on traditional materials and practices especially in heritage sites.

Traditional Knowledge System: Understanding the concept of traditional knowledge – Difference between traditional knowledge and formal education – advantages and disadvantages – need for safe guarding traditional knowledge – examples of traditional knowledge system in various fields.

Traditional Architectural Practice: Need based architecture – evolution of different typologies of architecture – housing – religious – forts – Introduction to books like Manasara, Mayamatam and its contents – Basics of Agama principles, evidence from Sangam Literature - Systems of calculations and geometry - Fusing of native knowledge with modern practices - Select case studies.

Architecture & Associated Crafts: Traditional crafts and craftsmen of Indian architecture – traditional knowledge in building sciences and environmental studies - associated craftsmen like artist, carpenter, weavers - select case studies using materials like bamboo, bricks, lime, terracotta, etc.- Indigenous Construction Techniques like Chettinad Plaster, Athangudi Tiles, Madras Terrace Roof, Araish Lohi Lime Plaster.

Development of Historic Cities : Historic City, a product of people, place and time – General Planning strategies for city planning in ancient times – religious structures, road network, irrigation channels, occupation-based settlement designs – sustainability of historic cities – selected case studies of Srirangam, Kancheepuram, Hampi, Nalanda, Benares, etc.

Traditional Knowledge & Conservation: Methods of gaining traditional knowledge – importance and ways of documenting traditional practices application process of traditional knowledge in practice – site visit and field work- Risk Management in Heritage Sites

Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.

Assessment Methodology: Two Assessments with equal weightage.
One Assessment as Internal written Test /Examination (50%), second as Assignment (50%) of any mode such as study, seminar, and or a combination of modes, etc.

References:

1. Coomaraswamy, A. K., & Vatsyayan, K. (n.d.). *The transformation of nature in art*. Indira Gandhi National Centre for the Arts. ISBN 9788120716438.
2. Foucault, M. (1994). *The order of things: An archaeology of the human sciences*. Routledge. ISBN 9780415267373.
3. Wright, A. (1991). *Craft techniques for traditional buildings*. Batsford. ISBN 0713464194.

	Description of CO	PO Mapping
CO1	Relate to the concept of traditional knowledge and differentiate between that and formal education.	PO1(1) PO3(2) PO4(2) PO5(1) PO6(1)
CO2	Explain the typologies of architecture, evolution of need-based architecture. bout cultural study and their methodologies.	PO3(1) PO5(1) PO6(1)
CO3	Relate their mind and assess the importance of traditional crafts and the importance of craftsmen and materials	PO3(1)
CO4	Illustrate the importance of general planning strategies in ancient cities.	PO1(1) PO3(2) PO5(1
CO5	Build a knowledge bank on traditional materials and practices that can be applied to current projects as well.	PO3(1) PO4(1) PO6(1)

CO25104	Documentation Techniques and Information Data Management	L	T	P/S	C
		1	0	3	4

Course Objectives:

- To impart necessary technical skills and competence required for the preparation of inventories of cultural resource for survey, analysis and documentation.
- To create awareness about the need for a methodical and systematic process for inventory as an essential basis for management and conservation plans.
- To enable students to try their hands out on the field documenting using new methods and tools
- To give competency in documenting, organizing, storing and managing information in written, oral or visual form using GIS and other tools.

Documentation: Need & types Introduction to documentation – need and importance of documentation and inventory in conservation – maintaining records and using documented work–archiving - Available methods of documentation and communication – recording oral facts – standards of documentation - measurement book – field survey books – selection of appropriate method of documenting – tools selection – preparation for field documentation

Documentation Techniques – Manual & Digital: Introduction to methods of physical documentation – hand sketching – measured drawing – colour coding Exercise - Documentation of a live case study including field work Photography – archiving digital data – use of software for measured drawing – 2D and 3D rendering of historic structures for documentation - Communicating documentation including technical skills and competence Exercise - Documentation of a live case study including field work

Data Collection, Storage, Organization & Analysis; Different methods of data collection (primary & secondary) - Library & archives – Internet – importance of reliability of source – classification & reviewing data – understanding the value of data – Documents as a source of data collection. Data compilation & storage – storage of classified data – Data cleaning – Data theft – need for Backup – Digitizing & listing stored data – Data saving techniques - Challenges in data collection & storage. Interpretation of data - cross comparison and over lapping of data collected - Data Linking - Data Analysis – Archiving of analyzed Data – System Data Storage – Tools and equipment's for storage - Compiling and Report generation – Drafting a report and presentation

Digital Imaging: Digitizing entities – artifacts, architectural elements, architectural sites, Digitizing details, easel paintings, sculpture, etc., Use of advanced technology in the capture & delivery of certain types of digital images – Digital photography (field visits & photo sessions) – image enhancement techniques, application of filters, image editing & other tools

Modern Documentation & Data Management Techniques: Photogrammetry – modern survey equipment's – remote sensing tools for measuring – laser detection tools for measuring and survey - digitized survey tools – usage of cloud computing – creating

and maintaining digital archive - Applying Digital Imaging to Cultural Heritage, Introduction, use & application of GIS in heritage conservation – digital mapping – storing and safe guarding GIS images

Weightage: Continuous Assessment: 50%, End Semester Examinations: 50%

Assessment Methodology and weightage: Three Assessments with equal weightage.

One Assessment as Internal written Test /Examination (approx.33.33%), other two Assignments (approx.33.33% each) incorporate continuous marking of the work and performance during the particular assessment period such as drawings, models, study, seminar, etc.

References:

1. O'Sullivan, D., & Unwin, D. J. (n.d.). *Geographic information analysis*. [Call number: 910.285 SUL-G].
2. Lee, E. S., & Forthofer, R. N. (n.d.). *Analyzing complex survey data*. [Call number: 300.727 LEE-A].
3. International Council on Monuments and Sites (ICOMOS). (1990). *Guide to recording historic buildings*. Butterworth. ISBN 075061210X.
4. Krygier, J., & Wood, D. (n.d.). *Making maps: A visual guide to map design for GIS*. [Call number: 526 KRY-M].
5. MacDonald, L. (Ed.). (n.d.). *Digital heritage: Applying digital imaging to cultural heritage*. Routledge. ISBN 978-0-75-066183-6.
6. Sykes, M. H. (1984). *Manual on systems of inventorying immovable cultural property*. UNESCO. ISBN 9789231020803.
7. French Ministry for Education and Culture. (1992). *Architectural heritage: Inventory and documentation, methods in Europe* (Proceedings). Council of Europe. ISBN 9287123411.
8. Swallow, P. (1993). *Measurement and recording of historic buildings*. Donhead. ISBN 9781873394083.
9. Watt, D., & Swallow, P. (1996). *Surveying historic buildings*. Donhead. ISBN 9781873394670.

	Description of CO	**PO Mapping**
CO1	Relate to the various technical skills and competence required for the preparation of inventories of our built heritage.	PO1(3), PO2(3) PO3(2), PO4 (2) PO5(3), PO6(2)
CO2	Explain the various types of methods and processes involved in documenting our heritage	PO1(1), PO2(2) PO3(1), PO4 (2) PO5(2), PO6(2)
CO3	Correlate their mind and assess various methods of documentation on site.	PO1(3), PO3(3) PO4 (2), PO5(2) PO6(2)
CO4	Conclude the importance of documenting, organizing, storing and managing information in written, oral or visual form using GIS and other tools.	PO1(2), PO2(1) PO3(2)

CO25105	Conservation Studio I	L	T	P	C
		0	0	10	10

Course Objectives:

- To enable the student to understand the difference between a conservation project and a new design project
- To enable the student to understand the importance of site context and age of the building/ site.
- To prepare the student to see the potential of a building in disrepair and analyze the methods it can be rehabilitated with.

Content

Projects either by individuals or groups shall be worked upon emphasizing on the following:

- Understanding historic buildings / site.
- Demarcation of historic sites and its relationship to surroundings.
- Detailed documentation of the site/structure.
- Understanding the building and composition of building materials.
- Identification of function, use and condition of the buildings/site.
- Statement of Significance of historic buildings/site.
- Maintenance, Management and Conservation of the buildings/site includes planning interventions.

The project contents would include programming for the project, appreciation and identification of heritage value, interpretation and interventions. Exploring various research methods & data collection techniques would be part of the exercise. The tutorials and studio program will help the students in the development of project statement, data analysis and critical inferences for design application.

Weightage: Continuous Assessment: 50%, End Semester Examinations: 50%.

Assessment Methodology: Three Assessments with equal weightage (approx.33.33% each).
Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period.

	Description of CO	PO Mapping
CO1	Recognise the importance of conservation architect	PO1(3) PO3(3) PO5(2)
CO2	Connect the importance of the cultural heritage of the site and building	PO3(3) PO4(2) PO6(1)
CO3	Build a sustainable heritage proposal for an historic building.	PO2(3) PO4(3) PO6(2)