



ANNA UNIVERSITY, CHENNAI

POSTGRADUATE CURRICULUM (NON.AUTONOMOUS AFFILIATED INSTITUTIONS)

Programme: M. Arch. (Conservation)

Regulations: 2025

Abbreviations:

Category

Course Type

PC – Professional Core

S - Studio

PE – Professional Elective

T – Theory

BS & AE – Basic Sciences & Applied Engineering

TS – Theory cum Studio

PAE – Professional Ability Enhancement

IT – Internship Training

SD – Skill Development

LIT – Laboratory Integrated Theory

HUM – Humanities (including Languages and others)

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.	CO25201	Materials and Structural Systems	T	3	0	0	3	3	PC
2.	CO25202	Strengthening and Retrofitting Historic Structures	T	3	0	0	3	3	PC
3.	CO25203	Project Management in Conservation	T	3	0	0	3	3	PC
4.	MH25C03	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.	CO25204	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.	CO25301	Services in Historic Buildings	T	3	0	0	3	3	PC
2.	CO25302	Conservation Legislation	T	3	0	0	3	3	PC
3.	CO25303	Dissertation	T	0	0	4	4	4	PC
4.	CO25304	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.	CO25305	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.	CO25401	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.	CO25001	Cultural Anthropology and Sociology	3	0	0	3	3
2.	CO25002	Shared Built Heritage	3	0	0	3	3
3.	CO25003	Natural and Designed Landscape	3	0	0	3	3
4.	CO25004	Cultural Landscape	1	0	2	3	3
5.	CO25005	Museum Design and Management	1	0	2	3	3
6.	CO25006	History of Western Architectural Conservation	3	0	0	3	3
7.	MH25C06	Soft Skills	2	0	1	3	3
8.	CO25007	Sacred Landscapes	3	0	0	3	3
9.	CO25008	World Heritage Sites	3	0	0	3	3
10.	CO25009	Sustainability and Conservation	3	0	0	3	3
11.	CO25010	Landscape Conservation	3	0	0	3	3
12.	CO25011	Urban Conservation and Practice	3	0	0	3	3
13.	CO25012	Sustainable Tourism and Visitor Management	3	0	0	3	3
14.	MH25C05	Psychology of Learning and Development	3	0	0	3	3
15.	CO25013	Heritage Impact Assessment	3	0	0	3	3
16.	CO25014	Disaster Management of Cultural Resources	3	0	0	3	3
17.	CO25015	Economics of Preservation and Heritage	3	0	0	3	3
18.	MH25C07	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
<p>Course Objectives:</p> <ul style="list-style-type: none"> 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. 					
<p>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.</p>					
<p>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.</p>					
<p>Researching and Data Collection: Library and archives. Internet: New information and the role of internet. Finding and evaluating sources. Misuse. Test for reliability. Ethics.</p> <p>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.</p>					
<p>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</p>					
<p>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.</p>					
<p>Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.</p>					
<p>Assessment Methodology: Two Assessments with equal weightage.</p> <p>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.</p>					

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., Stomppf, 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: <ul style="list-style-type: none"> 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: <ol style="list-style-type: none"> Biswas, S. S. (1999). <i>Protecting the cultural heritage: National legislation and international conventions</i>. [Call number: 344.094 BIS-P]. Pant, D. K. (2012). <i>Care and administration of heritage monuments in India</i>. [Call number: 725.940954 PAN-C1784-1904]. Bracker, A., & Richmond, A. (Eds.). (n.d.). <i>Conservation: Principles, dilemmas and uncomfortable truths</i>. [Call number: 363.69 CON]. Cumming, J. (n.d.). <i>Revealing India's past</i>. 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
<p>Course Objectives:</p> <ul style="list-style-type: none"> 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. 					
<p>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.</p>					
<p>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</p>					
<p>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.</p>					
<p>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.</p>					
<p>Case Study : Culture mapping and study of practices of selected social communities of India</p>					
<p>Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.</p>					
<p>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.</p>					
<p>References:</p> <ol style="list-style-type: none"> Blistene, B. (2001). <i>History of 20th-century art</i>. Flammarion. ISBN 9782080105646. Heath, K. W. (2009). <i>Vernacular architecture and regional design: Cultural process and environmental response</i>. [Call number: 720.103 HEA]. Sørensen, M. L. S., & Carman, J. (Eds.). (n.d.). <i>Heritage studies: Methods and approaches</i>. Routledge. ISBN 9780415431859. Noble, A. G. (n.d.). <i>Traditional building: A global survey of structural forms and cultural functions</i>. ISBN 9781890206628. Sengupta, G., & Gangopadhyay, K. (Eds.). (2009). <i>Archaeology in India: Individuals, ideas and institutions</i>. [Call number: 934 ARC]. Tschumi, B. (1994). <i>Architecture and disjunction</i>. 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: <ul style="list-style-type: none"> 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: <ol style="list-style-type: none"> Coomaraswamy, A. K., & Vatsyayan, K. (n.d.). <i>The transformation of nature in art</i>. Indira Gandhi National Centre for the Arts. ISBN 9788120716438. Foucault, M. (1994). <i>The order of things: An archaeology of the human sciences</i>. 					

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. about 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 overlapping 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	<table border="1"> <thead> <tr> <th>L</th> <th>T</th> <th>P</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>10</td> <td>10</td> </tr> </tbody> </table>	L	T	P	C	0	0	10	10
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)

Semester II

CO25201	Materials and Structural Systems	L	T	P	C
		3	0	0	3
Course Objectives: <ul style="list-style-type: none"> To enable students to various properties of historic building materials. To enable students to understand various types of structural systems that are common in heritage buildings To provide information on various causes of decay in both materials and structural systems. To expose students to various methods of assessment and investigations to check on structural stability. To enable students to connect traditional structural systems to current context 					
Historic Building Materials: Historic building materials - location, formation, physical and chemical properties, types, availability, sourcing, characterization of materials & compatibility of its usage, relationship of strength of materials used to the type of heritage structure, weathering characteristics, workability – select building materials like Lime, Stone, Timber, Brick, Glass, Cement, Concrete, etc.					
Historic Structural Systems: Various types of structural systems, Trabeate & arcuate systems, loading patterns, different structural components - arches, domes, vaults, beams, slabs, vertical supports, trusses & foundation with different building materials & loading conditions, their behavior, calculation of stresses & deformations.					
Causes Of Decay in Materials & Structures: Gravity factor, Natural factors – climatic, natural disasters, botanical, biological & entomological causes of decay, Termite infestation, other causes for weakening of materials, Man-made factors – lack of maintenance strategies, vibration, atmospheric pollution, inappropriate use, etc.					
Assessment of Materials & Structure: Methods of assessing materials – Physical & Chemical diagnosis of defects in materials, destructive (sample collection) & non-destructive tests (sound, penetrating radiation, optical & electromagnetic tests), Assessment report. Structural assessment of historic buildings – types of investigations required, condition mapping, equipment & monitoring, characteristic symptoms of structural distresses, failure of structural elements, Structural Analysis Techniques & Report.					
Case Studies: Case studies of historical buildings with columnar & trabeate structure to understand materials used for various building components, structural behavioral patterns, methods of assessment, defect analysis & reporting. Case studies of historical buildings with arcuate structure to understand materials used for various building components, structural behavioral patterns, methods of assessment, defect analysis & reporting.					
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: <ol style="list-style-type: none"> Bernard Feilden, ISBN: 0750658630, Conservation of Historic Buildings J. Stanley Rabun, ISBN: 978-0-471-31545-2, Structural Analysis of Historic Buildings: Restoration, Preservation, and Adaptive Reuse Applications for Architects and Engineers 					

CO25202	Strengthening and Retrofitting Historic Structures	L	T	P	C
		3	0	0	3

Course Objectives:

- To introduce various interventions in conservation related issues
- The objective is to understand solutions for repair and strengthening of structural system of historic structures and also upgrading them to cater to the contemporary demands and needs.
- To provide rescue measures and techniques to strengthen the historic buildings
- The detailing of appropriate options of intervention will lead to making of an implementable document. Case studies of completed projects shall be evaluated towards quantification and quality.
- To introduce adaptive reuse methods and retrofitting techniques

Introduction: Degrees of Intervention in Historic buildings, Definition of Restoration, Retrofitting & Adaptive re-use, Major issues & challenges faced in India

Repair & Retrofitting Process: Building/Site Inspection, assessment procedure for evaluating a damaged structure- Research, analysis & Recording, causes of deterioration & testing techniques – Diagnosis & Cure - Budget– Design Strategies – Execution - Strategic Maintenance Plan, Advantages of preventive maintenance.

Strengthening & Treatments: Assessment Report reading – immediate rescue measures for distress in buildings – shoring, underpinning, shuttering, etc. Non-structural repairs - simple traditional remedies, advanced methods, mortar repair for cracks– preventive measures. Special Techniques of repair & reconstruction – consolidation, grouting, painting, strengthening & replacement, Jacking, drilling, Scaffolding, etc.

Structural repairs - Various advanced techniques of strengthening and retrofitting - Gunite and shotcrete epoxy injection. Repairs to overcome low member strength like deflection, cracking, chemical disruption, weathering, wear, fire, marine exposure, etc. like section enlargement, rust eliminators and polymers coating for rebar's, etc. Engineered demolition techniques for dilapidated structures-Case studies

Case Studies: Select case studies of restored/conserved buildings in India to understand the process & details of strengthening & retrofitting heritage structures including financial implications

Adaptive Reuse: Need for adaptive reuse - Issues to be explored in building adaption - Economic, social, environmental, and assessment models for adaptive reuse - Case studies of buildings with adaptive reuse.

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. Beckmann, Poul Structural Aspects of Building Conservation, McGraw Hill, 1995 ISBN: 0750657332

2. Benya, James R. Lighting Retrofit and Relighting: a Guide to green lighting solutions, 2011621.321BEN-L
3. CPWD Analysis of Rates for Delhi-CPWD [cpwd.gov.in/deputation/ar1- final.pdf](http://cpwd.gov.in/deputation/ar1-final.pdf)
4. John Marshall Conservation Manual: A handbook for the use of Archaeological Officers and others entrusted with the care of ancient monuments,1923 Calcutta: Superintendent Government Printing, Archaeological Survey of India
5. Murthy, K.L. Structural Conservation of Monuments in South India,1997 720.954 MUR-S
6. Powys, A.R. Repair of Ancient Buildings, Society for Protection of Ancient Buildings,1981 ISBN:189885601X
7. Thorpe, David, Sustainable Home Refurbishment: the Earth scan expert guide to retrofitting homes for efficiency,2010 696THO-S

CO25203	Project Management In Conservation	L	T	P	C
		3	0	0	3
Course Objectives:					
<ul style="list-style-type: none"> • The objective is to understand core principles of Project Management • The focus is on using Project Management tools for effective conduction of conservation projects in particular • To enable the students to create communication models and methods • To create awareness on the safety and risk management • To learn portfolio management through case studies. 					
Introduction to Project Management: Introduction - Project management, Project management versus Traditional management, Different forms of Project Management – Project Phases – Project Life Cycle – Project Management Process through Initiation, Planning, Execution, control and closure within the triple constraints of scope, time and cost with all inputs, tools & techniques and outputs.					
Conservation Project Planning: Project Plan Development - Scope planning with inputs – Master Plan – Programming – Scheduling – Project Organization–Scope planning and Work Definition, Tools and techniques-Expert Judgment and meetings, Monitoring Plan – Operational Plan - Outputs of scope planning-Collect requirements, defining scope - WBS, Classification of levels, Scope Control- scope verification and change control					
Communication Management: Project Management plan - The Project Management Configuration Plan - Stakeholder register, Documentation and Communication “Road Map” – Enterprise environmental factors, Organizational process assets. Tools & techniques - Communication requirements analysis, Communication Technology –Communication models and methods: General Guidelines for Effective Communication - Communication Management plan to manage stakeholder engagement -Project Manager’s Checklist& Project documents update					
Safety & Risk Management: Identifying risk, preparing for risk identification, risk categories, referring to historical information - Identifying the project risk – Reviewing project documents, brainstorming, analyzing SWOT – Examining the results of risk identification, qualitative and quantitative risk analysis - Safety in construction contracts - Safety record keeping - Safety culture - Safe workers - Safety and first line supervisors, safety and middle managers, top management practices - Company activities and safety- Safety Personnel - Contractual obligation - Project Coordination and Safety Procedures - Workers Compensation					
Portfolio Management: Defining and Implementing Project Portfolio Management – Objectives, practices and organizational roles – evolution of PPM - Bridging the Gap between Operations management and Project Management for multiple projects- Importance of Case Study and its relevance – Analysis and references from case study of conservation Project					
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. Bruce Barkley Project Risk Management (Project Management), McGraw-Hill Professional, 2004, ISBN :9780071436915
2. Calin M. Popescu, Chotchai Charoenngam Project planning, Scheduling and Control in Construction: An Encyclopedia of Terms and Applications, John Wiley, New York, 1995 ISBN: 978-0195084948
3. James B. Atkins and Grant A. Simpson Managing Project Risk: Best Practices for Architects and Related Professionals, Wiley, 2008, ISBN: 978-0-470-27381-4
4. Jonathan F. Hutchings Project Scheduling Handbook (Civil and Environmental Engineering), CRC Press, 2003 ISBN 9780824746216
5. Project Management Institute A Guide to the Project Management Body of Knowledge (PMBOK Guide), Project Management Institute, Incorporated, 2013 ISBN 978-1-935589-67-9

Course Outcomes

- The assignments shall be based on legal documents and their reviews.
- Assignment will be in the form of reports, reviews and tutorials with suitable case studies.
- Students shall learn about law for protection of heritage in India.
- Students will learn safety related issues and solutions
- Students will learn to implement project portfolio management

MH25C03	Geographical Information Systems For Built Environment	L	T	P	C
		1	0	3	4

Course Objectives:

- To introduce role of GIS in
- To give basic familiarity with the concepts, tools and techniques of GIS
- To give training in the application of GIS for built environment.

Introduction to G.I.S: Introduction to Geographical Information System (GIS). Defining the objectives of GIS in problems related to the macro environment. Outline of commercial and open source GIS software and introduction to basic components of GIS software. Outline of Spatial and non spatial data. Understanding of Projection and Coordinate systems. Preparation of map with appropriate format for specific purposes.

Spatial and Attribute Data Input: Passive and Active Remote Sensing, Image Processing – Spectral Signature Curve, GPS, Aerial Photograph, Satellite Imagery, LIDAR and Drones. Identification of required spatial data layers. Coding schemes. National Urban Information System. Digitisation of spatial data. Editing. Geo-referencing of Satellite Imagery, Cadastral Map, Role of attribute data in defining geographic features. Adding attribute

Spatial Analysis Using GIS: Generation of 3-D Model in GIS. Performing overlay functions. Manipulating attribute data. Preparation of Existing Land use. Map and report generation. Network Analysis.

Modelling the Macro Environment: Need for modelling the macro environment for different scales and purposes. Modelling for suitability/ projects/ situations/ problems in the realm of landscape design, urban design, urban and environmental planning.

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

Assessment Methodology: Three Assessments with equal weightage. One Assessment as Internal written Test /Examination (33.33%), other two assessment (each assessment weightage - 33.33%) as continuous marking of the work and performance during the particular assessment period such as drawings, models, study, seminar, etc.,

References:

1. Arthur. H. Robinson et al., 'Elements of Cartography', John Wiley & Sons, New York, 1995.
2. Judith. A. Tyner, 'Principles of Map Design', The Guilford Press, New York, 2010.
3. Ramesh Elmasri and Shamkant.B.Navate, 'Fundamentals of Database Systems', Pearson Education Limited, USA, 2010.
4. Anji Reddy.M., 'Text book of Remote Sensing and Geographical Information Systems', B.S. Publications, Hyderabad, 2008.
5. Michael Law and Amy Collins, 'Getting to know ArcGIS Pro', ESRI Press, USA, 2016.
7. Paul. D. Zwick and Margaret.H. Carr, 'Smart Land-use Analysis: The LUCIS Model', ESRI Press, USA, 2007.
8. David Maquire, Michael Batty and Michael F.Goodchild, 'GIS,Spatial Analysis and Modeling', ESRI Press, 2005.
9. Cynthia A. Brewer, 'Designing Better Maps: A Guide for GIS Users' – 2nd Edition, ESRI Press, 2015.

E-resources:

1. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2005). *Geographic Information Systems and Science* (2nd ed.). Wiley.
<https://archive.org/details/geographicinforma0000long>
2. de By, R. A., et al. (2009). *Principles of Geographic Information Systems*. ITC, University of Twente.
https://webapps.itc.utwente.nl/librarywww/papers_2009/general/principlesgis.pdf
(A free textbook developed for university-level GIS courses)
3. Nushi, B., & Bejleri, I. (2017). *The use of GIS for analysis and visualization of building energy consumption*. *IFAC-PapersOnLine*, 50(1), 11736–11741.
<https://doi.org/10.1016/j.ifacol.2017.08.2189>
4. UN-Habitat. (2015). *Using ICTs and GIS for Urban Planning and Service Delivery in the Developing World*. <https://unhabitat.org/books/using-icts-and-gis-for-urban-planning-and-service-delivery-in-the-developing-world/>
5. Pérez, D., & Ranasinghe, D. (2020). *Smart cities and the role of GIS in urban resilience and planning*. *World Bank Group Technical Report*.
<https://openknowledge.worldbank.org/handle/10986/34744>

Course Outcomes

- Awareness of GIS and the context of its use for different purposes
- Knowledge of concepts, techniques, methods of GIS
- Ability to apply GIS for specific situations/ realms involving the built environment

CO25204	Conservation Studio II	L	T	P	C
		0	0	10	10
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective is to introduce the problems and issues confronting historic core and urban areas. • The aim of the studio in this semester is to introduce the students to a historic site, historic city or environment which is more complex and larger in scale to the building. • The exercise shall address issues related to heritage at the urban scale. • The attempt will be to adopt an integrated approach. 					
<p>Content</p> <p>Projects by either individuals or groups shall be worked upon emphasizing on the following:</p> <ul style="list-style-type: none"> • Understanding historic core and its linkage to developing city. • Demarcation of historic core and its relationship to surroundings. • Understanding the historic core in terms of built and open spaces, skyline, interface and transitions. • Identification of function, use and condition of the buildings/site/historic cores. • Statement of Significance. • Maintenance, Management and Conservation plan. • Planning Interventions <p>The project shall emphasize on assessment of cultural significance and community participation for conservation and area and city level issues in architectural conservation. Identification of Heritage Zones and their appreciation of architectural vocabulary. Traditional building technology, streets, markets, neighborhoods and their heritage value. Preparation of conversation plans and management plans as required. Formulation and application of conservation policy and guidelines for historic areas and extensions.</p>					
<p>Course Outcomes</p> <ul style="list-style-type: none"> • Students will understand the cultural significance of the historic core • Students shall study and find solutions to problem and issues confronting historic core/urban areas. • Students will learn to formulate guidelines and policies. • The studio shall be progressive work in groups. Deliverables shall include drawings and report. Progressive presentations shall be made for reviews at various stages. 					
<p>Weightage: Continuous Assessment: 50%, End Semester Examinations: 50%.</p>					
<p>Assessment Methodology: Three Assessments with equal weightage. Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. Each assessment weightage - 33.33%.</p>					

Semester III

CO25301	Services in Historic Buildings	L	T	P	C
		3	0	0	3

Course Objectives:

- The objective is to introduce the students to various fields of services involved in heritage structures.
- The focus on upgrading services with respect to original design and materials while meeting applicable codes and occupant needs.
- To exercise and address issues related to services in historic structures
- The attempt will be to improve the internal environment by installing appropriate building services.
- The focus will be on an integrated approach to services on historic structures.

Introduction to Services in Historic Structures

Need and necessity for services – Permissible interventions – Norms to be followed – Planning of service lines – Service provisions and adaptive reuse – Energy Efficiency in Historic Buildings- Provisions by ASI for service system installations, ducting etc.

Plumbing Services in Historic Structures

Plumbing Codes -Health Requirements for Plumbing - Water Quantity calculations- Water-Pipe Sizing- Waste water piping-Wastewater-System Elements - Waste-Pipe Materials - Layout of Waste Piping - Interceptors - Piping for Indirect Wastes - Venting - Plumbing-System Inspection and Tests.

Electrical, Lighting & Airconditioning Services

Electrical power – DC / AC system, electrical load and emergency power – electrical conductors and raceways – electrical distribution in buildings –power distribution system – standby and alternate power supply system.

Light and sight – quality of light – lighting methods – daylight – system design of lighting.– selection of recommended I luminance - - Lamp characteristics and Selection Guide –Impact of light on colour - Integration of services – Electrical power monitoring

Major Factors in HVAC Design – Ventilation - Duct Design - Heat Losses - Heat Gains - methods of cooling and air conditioning - Sizing an Air- Conditioning Plant – Refrigeration - Cycles - Air- Distribution Temperature for Cooling - Energy efficiency techniques in air conditioning - Air conditioning in museums, historic structures etc.,

Fire Safety & Control Systems

Fire detection & Fire alarm systems – fire protections systems – study of codes and standards - sprinkler systems -Automatic Sprinklers - System Design and layout – Standpipes- Water Supplies for sprinkler and Standpipe Systems – Central Station Supervisory Systems— fire alarm system – fire- fighting system and monitoring –safety and security systems – FAS, PAS – access control system- fire fighter telephone system – CCTV surveillance system – IBMS system.

Integrated Service Planning

Vibrations from mechanical equipment-Pumps & motors - basic practice of vibration isolation & guidelines, wall, floor & ceiling construction AC ducts - Characteristics of duct system noise, noise sources in ducts, Building Codes& Standards, Civil infrastructure services for residential and institutional complexes with planning, design, construction and maintenance of external development works such as water supply, sewerage, solid wastes, roads and storm water drainage, including rain water harvesting methods

References:

1. Fred hall and Roger Greeno, Building Services Handbook
2. Gurcharan Singh, Jagdish Singh, Water Supply & Sanitary Engineering
3. Krieder, J. F., Handbook of Heating Ventilation and Air Conditioning
4. Shri V.K. Jain, Fire Safety in Buildings
5. W. E. Steward, T. A. Stubbs Modern Wiring Practice Design and Installation BIS, National Building Code 2005.

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.

Course Outcomes

- Relate to norms and planning of modern services in historic structures.
- Explain the appropriate solutions for integrating various services in historic structures.
- Apply the acquired skills on-site and propose appropriate services.
- Analyze and formulate proposal for integrating the various modern services in heritage structure.
- Build case studies in the form of reports, reviews and tutorials with suitable illustrations.

CO25302	Conservation legislation	L	T	P	C
		3	0	0	3
Course Objectives: <ul style="list-style-type: none"> • The objective is to understand relationship between laws with the jurisdiction and its relationship to conservation practice. • To understand the extent of legal impacts on society and heritage • To focus on understanding of local and national legislation and practices related to heritage conservation. • The attempt will improve understanding of international conservation laws • To interpret conservation laws and to formulate conservation proposals consistent with them. 					
Condition Of Heritage in India Definition of heritage – types of heritage and their value – classification of heritage assets – their condition – means of safe guarding heritage assets – law and its jurisdiction					
National Legislation I Laws for protection of heritage in India including the provisions under the Constitution of India and 73rd and 74th amendments to the Constitution; AMASR act 1958, Antiquities and Art Treasures Act 1972, The Public Records Act of 1993, Hampi World Heritage Area Management Authority Act 2002, Majuli Cultural Landscape Region Act 2006;					
National Legislation II Town and Country planning Act, Maharashtra Region - Town and Country Planning Act 1966 Gazettee' Draft list of heritage buildings and precincts for Greater Mumbai the Andhra Pradesh Urban Area Act 1975; Indian forest Act, Land Acquisition Act 1827, Public Premises Eviction Act 1971 etc. Coastal Regulation Zone (CRZ) Regulation; Cantonment Act 2006 and Environment (Protection) Act, 1986 etc.					
National Legislation III Legal protection under Ancient Monuments and Archaeological Sites and Remains Act of 1958 with all its amendments (July 1992 notification and The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010) and the corresponding State Acts. Role of Archeological Survey of India, National Monument Authority, etc. in protection of heritage in India.					
International Legislation Legal systems of protection of heritage across the globe – Listing of monuments by UNESCO – norms and criteria for protection of world heritage - UNESCO intervention in protecting world heritage Case study - Various plans for conservation including, management plan, conservation plan, etc. and its statutory status.					
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: <ol style="list-style-type: none"> 1. E.F.N. Ribeiro The Law and the Conservation of Man-made Heritage in India, 1989 New Delhi: INTACH 2. McGlade, James, ed. and Leeuw Time, Process and Structured Transformation in Archaeology, 2010, Sander VanDer, ed. 930.1 TIM. 3. Tripathi, Alok Ancient monuments and Archaeological Sites and Remains Act, 1958: with Rules Amendments, Notifications and Orders, 2007 344.094 TRI-A. 					

Course Outcomes

- Relate law for protection of heritage in India.
- Explain and understand the role each legislation plays in the society and historic conservation all over the world
- Apply and assess the importance and need of legislation in our country.
- Analyze the importance of various laws pertaining to heritage in a national perspective.
- Build case studies based on legal documents in the form of reports, reviews and presentations.

CO25303	Dissertation	L	T	P	C
		0	0	4	4
<p>Course Objectives:</p> <ul style="list-style-type: none"> • To expose the students to the various thrust areas in Architectural Conservation. • To inculcate the spirit of research in Conservation by providing opportunities to read on various issues. • To expose the students to the finer details of technical writing. • To provide a platform for a prelude to the 'Design Thesis'. • To formulate and reinforce knowledge of research procedures, and strengthen ability to undertake independent theoretical research on areas of enquiry, aspects and topics of relevance in Conservation. 					
<p>Content</p> <p>Dissertation is best expressed as 'Design in text'. It offers an opportunity to look at the research component in Conservation in various thrust areas such as history, theory, design and other value based aspects through texts. Students are encouraged to choose any topic of their interest. This may range from analyzing and a critique of the works of an architect, ideologies and philosophies of architects that get transformed spatially, history, typological architecture, sustainability issues and so on. The dissertation must comprise of an aim, the objectives, the scope and limitations of their dissertation, hypothesis (if any), methodology followed by extensive review of literature through references and documentation. The analysis of the work must be substantiated either empirically or through extensive arguments. A dissertation could also be a Thesis preparation course and gives the student scope for independent study and opportunity to explore specific area of interest which will form the basis of his/ her design thesis project in the next semester. The topic will have to be approved at the start of the semester and reviewed periodically by a jury at the end of the semester.</p>					
<p>References:</p> <ol style="list-style-type: none"> 1. Iain Borden and Kaaterina Ruedi; The Dissertation: An Architecture Student's Handbook; Architectural Press; 2005. 2. John W Creswell; Research design: Qualitative, Quantitative and Mixed Methods Approaches; 3. Linda Grant and David Wang, Architectural Research Methods, John Wiley Sons 2001. 4. Ranjith Kumar; Research Methodology- A step by step guide for beginners; Sage Publications; 2005. 5. Wayne C Booth; Joseph M Williams; Gregory G. Colomb; The Craft of Research, 2nd Edition; Chicago guides to writing, editing and publishing. 6. Richard Coyne, 'Interpretation in Architecture: Design as Way of Thinking', Routledge, 2005. 7. Stephen Bailey, 'Academic Writing: A Handbook for International Students', Routledge, 2011. 8. Adam Sharr, 'Reading Architecture and Culture', Routledge, 2012. 9. Vian Ahmed, Alex Opoku, Zeeshan Aziz, 'Research Methodology in the Built Environment', Routledge, 2016. 					

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

Assessment Methodology:

Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively.

Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.

Course Outcomes

- Relate to theory and practical aspects of major conservation practices and minor disciplines to undertake independent research.
- Explain and develop own dissertation topic with research-oriented study
- Apply and understand the core ideas of Application design through the experimental research
- Analyze and synthesize a defined context with in-depth study and scientific approach.

CO25304	Conservation Studio III	L	T	P	C
		0	0	10	10
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective is to introduce the students to the identification of problems and issues confronting heritage at a regional scale. • To enable the student to understand importance of context and infrastructure needed to sustain urban demands • To prepare the student to provide potential strategies and opportunities for sustaining the area. 					
<p>CONTENT</p> <p>Projects by either individuals or groups shall be worked upon emphasizing on the following:</p> <ul style="list-style-type: none"> • Understanding heritage at a regional scale like-cultural landscape, etc. • Identification of heritage with acknowledge system approach. • Demarcation of the heritage are an including revenue boundaries and ownership. • Statement of Significance. • Identification of function, use and interdependency within the region. • Understanding the needs of heritage management and development towards sustainable future. • Preparation of heritage management strategy. 					
<p>Weightage: Continuous Internal Assessment: 50%, End Semester Examinations: 50%.</p>					
<p>Assessment Methodology:</p> <p>Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively.</p> <p>Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.</p>					
<p>Course Outcomes</p> <ul style="list-style-type: none"> • The students shall study and find solutions to problem and issues confronting heritage at regional scale. • The students should be able to analyze the importance of the cultural landscape of the area. • The studio shall be progressive working group. Deliverables shall include drawings and report. 					

CO25305	Internship Training	L	T	P/S	C
		X	X	X	2
<p>Course Objectives:</p> <ul style="list-style-type: none"> • To strengthen further the understanding of students to the nuances of conservation practice through Professional Training. • To facilitate an understanding of the evolution of a conservation project from documentation to execution. • To enable an orientation that would include the process of identification, documentation, presentation skills, involvement in office discussions, client meetings, development of the drawings, report/ manual writing, site supervision during execution and coordination with the agencies involved in the conservation process. 					
<p>The Professional training is of minimum 6 weeks training under a conservation architect/ organization (Governmental or NGO) involved in conservation between the II and III Semesters. The choice of Office / Organization must be approved by the Head of the Institute.</p> <p>At the end of the Professional Training, a portfolio of work done during the period of Training along with certification from the office is to be submitted for evaluation by a viva voce examination. This will evaluate the understanding of the students about the drawings, detailing, materials, construction method and the knowledge gained during client meetings, consultant meetings and site meetings. The Head of the office/Organization were the student underwent Professional Training shall award 50% of the marks for the Viva Voce examination.</p>					
<p>Weightage: End Semester Examinations: 100%.</p>					
<p>Course Outcomes</p> <ul style="list-style-type: none"> • Ability to translate skills and knowledge of conservation architect acquired at university into a professional setting. • Increased skills in performing tasks and ability to communicate in a professional setting. • Understand the social and ethical role and show skills in using software applications in a professional context. 					

Semester IV

CO25401	Thesis Project	L	T	P/S	C
		0	0	20	20
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective is to develop and acquire more specialized knowledge in the field of conservation through conservation projects or scientific research. • The Thesis Project is a final culmination of knowledge acquired by students through the course of their sustainability curriculum. • Theoretical, cognitive, empirical and analytical skills pertaining to architectural sustainability will be tested during the thesis program. • Students shall consider large scale campus, environmental site planning, conservation, heritage districts etc. 					
<p>Content</p> <ul style="list-style-type: none"> • Thesis is the main academic effort and culmination of all information and techniques learnt in the preceding semesters. • Selection of thesis topic shall be from any aspect of Conservation whether theoretical, technical, management, operational or intervention. • It is expected to undertake original work including data collection and primary surveys • As part of the studio requirements, it is expected to go through a process of documentation, analyses and synthesis related to the specific topic and related area of work. • It is required to work under the guidance of a supervisor allotted by the department and complete the requisite work in the course of the semester, ending in a viva-voce exam by a panel of examiners both external and internal. • Progressive valuation would be done by a panel of external and/or internal jurors during reviews held at intervals during the course of the semester. <p>Students will submit a detailed proposal on their topic of interest. The Proposal shall be approved by the thesis review committee. The thesis project will be reviewed periodically by the review committee. At the end of the semester, the final thesis will be submitted and presented through a viva voce examination before a jury. Submission and defense of the thesis will be through drawings, reports, study sheets, models and digital presentations and verbal communications in all the reviews and the final viva-voce.</p>					
<p>Weightage: Continuous Internal Assessment: 50%, End Semester Examinations: 50%.</p>					
<p>Assessment Methodology: Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively.</p> <p>Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.</p>					
<p>Course Outcomes</p> <ul style="list-style-type: none"> • Students would be able to integrate various contemporary and advanced issues and techniques into the architectural conservation process. • Students would be able to identify and go in depth into specific and appropriate aspects relating to the discipline of conservation and reflect this in the realm of design. • The scope and extent in the thesis works shall be substantial and realizable in application or concept as appropriate to the selected area of work. 					

Professional Elective Courses

CO25001	Cultural Anthropology and Sociology	L	T	P/S	C
		3	0	0	3
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective of the module is to sensitize students to the significance of cultural influences. • To become aware of cultural differences and similarities, and to encourage others to interact and communicate efficiently with people of diverse cultural backgrounds. 					
<p>Introduction: Definition of Anthropology & Sociology – Its origin & development - Culture studies – Debate on the need for cultural studies – Popular theories of cultural interference – Cultural influence on life style</p>					
<p>Anthropology: Anthropology as a field of enquiry - nature and scope of anthropology - relationship of anthropology with architecture and other social sciences - Principles and methods of anthropological research - conceptualization of research - formulation of hypothesis, source of data, techniques of data collection- sampling, presentation and interpretation of data - methods of exploration.</p>					
<p>National & International Culture: Concepts and principles of national and international culture – Inter cultural and cross-cultural communication - Individual and collective, Social Interaction & Structure, Culture & community life, Socialization & social processes – Primary and Secondary Relations – material and mental - Culture, Authority, Social Control, conformity and Deviance, Difference and inequality.</p>					
<p>Culture & Architecture: Cultural concept: of house, neighborhood and cultural identity of a place - Settlement plans: cultural perspective, villages – tribes and non-tribal rural towns and township and cities - Cultural role of cities and sacred complex, rituals and festivals - Rural and urban Continuum</p>					
<p>Globalisation: Coding and Decoding of verbal and non-verbal communication in its cultural context – Developing skills for inter cultural communication – Understanding relationship between culture and globalization–Understanding process of globalization to international politics including politics of/for heritage - Understanding the relationship between local culture and global citizenship.</p>					
<p>Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.</p>					
<p>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.</p>					
<p>References:</p> <ol style="list-style-type: none"> 1. Barry, Peter Beginning theory: An Introduction to literary and cultural theory, 2011 801.95BAR-B 2. Bono, Edwardde Lateral and Parallel Thinking http:// www.edwdebono.com/debono/lateral.htm 3. Pande, Anupa, Art of Central Asia and the Indian subcontinent in Cross-Cultural Perspective, 2009 ed. 709.58ART 					

4. Paul Oliver(Editor) Encyclopedia of Vernacular Architecture of the World ISBN-10:0521564220
5. Verma,S. P. Crossing cultural frontiers: Biblical themes in Mughal painting,2011 759.04VER-C

Outcomes:

- CO1 Students shall be equipped to interact and communicate with people of diverse culturalbackground.
- C02 Students will understand the relationship of anthropology and architecture
- C03 Students will learn concepts and principles of national and international culture
- C04 The assignments shall include application of skills in primary survey.
- CO5 Assignment will be in the form of reports, reviews and tutorials with suitable illustrations

CO25002	Shared Built Heritage	L	T	P/S	C
		3	0	0	3
<p>Course Objectives:</p> <ul style="list-style-type: none"> The objective of the module is to sensitize students to the significance of cultural influences. To become aware of cultural differences and similarities, and to encourage others to interact and communicate efficiently with people of diverse cultural backgrounds. 					
<p>Introduction: Definition of Shared Built heritage - Defining and recognizing Shared Built heritage/Regions-location, formation, characteristic features– Definitions of Shared Built heritage as understood by other disciplines like UNESCO & ICOMOS.</p>					
<p>Understanding Shared Values: Understanding ‘Whose ‘heritage? –Cultural boundaries-Shared values- assessment-statement of significance-conflicting memories and association-Shared responsibility-Shared identity</p>					
<p>Colonial Shared Built Heritage: European colonization-historical overview- cultural context-British, Scottish, Dutch, Danish, French influences-influence of indigenous knowledge of Indian culture in colonial buildings- symbolism-Case studies from India--revival of shared legacy-Sustainable development and future of SBH in India.</p>					
<p>Case Studies: Conservation of SBH: Assessment of shared values- conservation projects: National & International case studies-policy level interventions-cross cultural reflections on political dominance-urban heritage conservation.</p>					
<p>Case studies: Case studies –understanding the issues-interventions-developing various meanings of Shared built heritage through examples.</p>					
<p>Weightage: Continuous Internal Assessment: 40%, End Semester Examinations: 60%.</p>					
<p>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.</p>					
<p>OUTCOMES:</p> <p>CO1 Students shall acquire knowledge about Shared Built heritage.</p> <p>CO2 Students will learn the values and challenges of conserving shared built heritage</p> <p>CO3 assignments would include application of concepts towards identification, understanding and mapping of Shared built heritage.</p> <p>CO4 Assignment will be in the form of reports, drawings and presentations.</p> <p>CO5 The students shall make progressive presentations for reviews at various stages.</p>					
<p>References:</p> <ol style="list-style-type: none"> Beyond Tranquebar, Grappling Across cultural boundaries in South India, edited by Esther Fihl, A.R.Venkatachalapathy, 2014 The Governor’s residence in Tranquebar, Edited by Esther Fihl Imperial Conversation, Indo-Britons and the Architecture of South India by Shanti Jayewardene-Pillai, 2007 Chapter, Second two- Whose heritage? Local and Global perspectives,The heritage reader, Edited by Graham Fairclough,Rodney Harrison, John H.Jameson Jnr, John Schofield. 					

CO25003	Natural and Designed Landscape	L	T	P/S	C
		3	0	0	3
Course Objectives: <ul style="list-style-type: none"> The objective is to understand the difference between Natural and Designed Landscape. It shall elaborate on the need and means to tackle the various issues related to conserving the historic landscapes, as an important aspect of cultural heritage. 					
Nature & Ecology: Understanding the ecosystem and their functioning — components of ecosystem - natural processes - Fundamentals of ecology - Ecological processes and dynamics— understanding ecological concepts like population growth, regulation, carrying capacity - colonization and succession - stability and resilience of ecosystem – ecosystem degradation.					
Landscape & Ecology: Introduction to landscape ecology – formation of various landforms – landforms and landscape process – pattern and structure of landscapes– concepts of patch, corridor and matrix - landscape dynamics and function – topological and chorological process within landscape - concept of landscape metrics – understanding dynamic interaction between landscape structure and function – ecological services of landscape.					
Site Planning Principles: Contours – representation of landforms and landform design, interpolation of contours, slope analysis, uses and function - Earth works – principles of earth work, cut and fill calculations – borrow pit method, average end area method, average spot level method, precautions taken in cut and fill methods in relation to soil conditions, amount of precipitation etc.,					
Landscape Designs of India: Early traditions and beliefs about landscape and environment in east - Ancient Indian traditions – Symbolic meanings and sacred value of natural landscapes - Open space development and its urban design and planning context - Public park as a major component of urban landscape - Open space development and Close conceptual relationship between Town planning, urban design and landscape architecture - Issues in contemporary India, Analysis and understanding of philosophies of contemporary landscape works in India, case studies.					
Landscape Management: Landscape management at the regional scale in relation to soil conservation, Land use planning and resource management - water management, forest management, grassland and agricultural management. Management practice related to urban ecology and urban habitats such as urban forests, urban water sheds, regional parks, green belts, Ecological, Economic and administrative issues, management models.					
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.					
Outcomes: CO1 Students shall develop skills to identify, maintain and manage natural and designed landscapes. CO2 Students will learn site planning concepts CO3 Students will learn landscape management models to handle the issues CO4 The assignments shall include case studies and application of principles for conservation. CO5 Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.					

References:

1. Gokhale, Yogesh, ed. And Negi, Ajeet K. 333.9516COM, Community-based biodiversity conservation in the Himalayas,2011
2. Lindenmayer, D.B., ed. And Hobbs, R.J.,ed. Managing and designing landscapes for conservation: moving from perspectives to principles,2007 712MANK8
3. Nigel,ed. Arguments for protected areas: Multiple benefits for conservation and use, 2010 Stolton, Sue, ed. And Dudley, 333.9516ARG
4. Priyaleen Singh Historic Gardens: making an Inventory for the Indian context, 2006. New Delhi: INTACH.
5. Rose, Dilys, ed. And Elliott, Joanna Earth-scan reader in poverty and biodiversity conservation, 2010, ed. 333.9516EAR
6. Trombulak, Stephen C., ed. And Baldwin, Robert F., ed. Landscape-scale conservation planning, 2010 333.72LAN

CO25004	Cultural Landscapes	L	T	P/S	C
		1	0	2	3
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective is to build understanding for protection and management of cultural landscapes. • To look at a region from a cultural perspective and approach conservation from a cultural stand point. • Its aim is to evolve the scope, scale and meaning of heritage from buildings to entire regions. 					
<p>Introduction to Cultural Landscape: Definition of landscape-ecology - Defining and recognizing Cultural Landscapes/Regions-location, formation, characteristic features– Definition of cultural landscapes as understood by other disciplines like US National Park Services and UNESCO.</p>					
<p>Cultural Geography: Techniques for assessing the cultural values of a Cultural Landscapes/Region - Demarcating Cultural Landscapes through various parameters like political, physical, natural, linguistic boundaries, etc. - Describing the cultural region through its components – the tangible heritage and the intangible aspects like crafts, traditional skills and local knowledge systems of such zones</p>					
<p>Assessment of Cultural Landscape: Need and use of assessment of cultural landscape – Methods of mapping the Cultural Landscapes– Forests and vegetation – their cultural values - Cultural Geography and regional symbolism - meanings behind cultural landscapes - components that make them unique - Review of contemporary regional boundaries based on standard parameters - cultural boundaries that exist in people’s minds integrated with their lifestyles and culture</p>					
<p>Preservation of Cultural Landscape: Analysis of Cultural Landscapes - Case study – identified in World Heritage List and in India like Braj, Bundelkhand, Kutch, Rock Shelters of Bhimbetka, etc. – cultural restoration of Ganga River.</p> <p>Management of Cultural Landscape: Management and Conservation of Cultural Landscapes /Regions – preservation strategies – tourism potential – threats to cultural landscapes and the causes – methods to safe guard and promote these landscapes</p>					
<p>Weightage: Continuous Internal Assessment: 50%, End Semester Examinations: 50%</p>					
<p>Assessment Methodology: Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively.</p> <p>Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.</p>					
<p>Outcomes:</p> <p>CO1 Students shall acquire knowledge about cultural landscapes.</p> <p>CO2 The assignments would include application of concepts towards identification, demarcation and mapping of cultural landscapes.</p> <p>CO3 Students will learn to assess the cultural landscape</p> <p>CO4 Assignment will be in the form of reports, drawings and presentations.</p> <p>CO5 Students will learn to apply the strategies to preserve the cultural landscape</p>					

References:

1. Agnoletti, Mauro, ed., Conservation of Cultural Landscapes, 2006 304.2CON
2. Oliver, Paul, Built to meet Needs: Cultural Issues in Vernacular Architecture, 2006 720.103OLI-B
3. Singh Purushottam, Archaeology of the Ganga Plain: Cultural-Historical Dimensions, 2010, 930.10954SIN-A
4. Singh, Rana P.B., ed. Heritage Scapes and Cultural Landscapes, 2011, 304.2HER.

CO25005	Museum Design and Management	L	T	P/S	C
		1	0	2	3
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The objective is to train and develop skills for Museum Design. • To introduce design and planning aspects of museum • To develop the ability to create inventories • To introduce digital interference • To learn to make management plans 					
<p>Introduction: Introduction to Museums – Collections and Artifacts – Types of objects – Public and private collections and museums – Characteristics of different display objects like historic, natural, prints, paintings, sculpture etc.</p>					
<p>Planning & Design: Spatial Planning – Classification of spaces into public, private etc. – Hierarchy of spaces – Safety and intrusions prevention - Vertical movement planning – Services including HVAC, Lighting, and IAQ etc. - Adapting an existing structure to set a museum – Case studies</p>					
<p>Archiving & Inventory: Collection of artifacts – Methods of collecting – Certification of antiquity – Registering – Log maintaining – Storage facilities in museums – Classification of objects – Display of artifacts – Rotational display system</p>					
<p>Digital Interference: Digital tools in museum management – CCTV and other safety equipment's – Information system – IBMS in museums – Digital Inventory – Information sharing to public through internet – Online information system on the museum</p>					
<p>Museum Management: Legislations and governance policies of museums in India – Safety Management – Security system – Precaution from natural disasters – Visitor management</p>					
<p>Weightage: Continuous Internal Assessment: 50%, End Semester Examinations: 50%</p>					
<p>Assessment Methodology: Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively.</p> <p>Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.</p>					
<p>Outcomes:</p> <p>CO1 Students will learn the basics of museum</p> <p>CO2 Students will learn design and planning aspects</p> <p>CO3 Students will create inventories</p> <p>CO4 Students will acquire knowledge to use digital tools in museum management</p> <p>CO5 Assignment will be in the form of are port, site visit report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material.</p>					
<p>References:</p> <ol style="list-style-type: none"> 1. Barry Lord, Gail Dexter Lord, Lind say Martin Manual of Museum Planning: Sustainable Space, Facilities and Operations ISBN:0759121478 2. Edward Porter Alexander Museums in motion: an introduction to the history and functions of museums ISBN:075910509X 3. George Jacob Museum: Design the Future,BooksurgeLlc,2009 ISBN:1439235740 4. Kevin Moore Museum Management ISBN:1134830653 5. Suzanne Macleod Reshaping Museum Space, Routledge,2005 ISBN:0203483227 					

CO25006	History of Western Architectural Conservation	L	T	P/S	C
		3	0	0	3
<p>Course Objectives:</p> <ul style="list-style-type: none"> • The students will learn various early approaches to conservation • The objective is to introduce personalities, ideologies and various philosophies that helped to formulate the principles of conservation discipline as it exists today abroad. • Students will learn from case studies • To be introduced to architectural conservation in the USA • The students shall be introduced to the various charters and development of UNESCO as the global agency and its role in the field of conservation. 					
<p>Early Approach to Conservation: Beginnings in the Renaissance – Works of Filippo Brunelleschi – Architectural Treatises of 15th Century – Early practice and protection - Conservation practices in the 17th Century – Reformist Movements and Neo Classicism – Archaeological Interests in the Age of Enlightenment - French Revolution, destruction and orders for protection</p>					
<p>Development of Conservation Theories in Europe: Restoration of Classical monuments – English Antiquarianism - Early Restoration in Germanic Countries – Early Efforts in Conservation in France - Organization and Administration — Discussion on Principles in France - Viollet-le-Duc, ‘Stylistic Restoration’— The Gothic Revival and Restoration— The Anti-Restoration Movement - Restoration Influences in Italy - Germanic Countries, ‘Denkmalkultus’</p>					
<p>Case Studies: Stylistic restoration & conservation movement in Italy - Restoration & conservation in the Papal states of Rome, Restoration & protection in Athens, Restoration of Durham Cathedral, Restoration of Magdeburg Cathedral, Restoration of la Madeleine, Vézelay</p>					
<p>Architectural Conservation in the USA: Conserving Historic Engineering Structures: Bridges, Emergence of an Historic Preservation System in the 1960s, The Economics and Standards of Historic Preservation, The Defining Role of U.S. Conservation Science and Technology, Preserving a Mosaic of Heritages in the United States and Its Territories, Historic Preservation and Sustainable Development</p>					
<p>Recent Trends: Governmental indulgence in conservation in developed nations of the west – Financial and Administrative policies for conservation in developed countries – International Charters on conservation,</p> <p>International Concern in Cultural Heritage — Formation of International Guidelines - International agencies involved in conservation – Contemporary aspects of heritage and conservation in the age of globalization</p>					
<p>Outcomes:</p> <p>CO1 Students shall be introduced to the evolution and principles of conservation in the West.</p> <p>CO2 Students will be knowing the theories of Europe</p> <p>CO3 Students will be learn architectural conservation from various examples from USA</p> <p>CO4 The assignments shall include studies of various charters and roles of various organizations in conservation.</p>					

CO5 Assignment will be in the form report, class reviews and tutorials covering topics mentioned

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. Bracker, A., Ed. and Richmond, A.,ed. Conservation: principles, dilemmas and uncomfortable truths,2009 363.69CON
2. Cleere Henry Approaches to the Archaeological Heritage: A Comparative Study of World ISBN:9780521243056
3. Cumming Sir John Revealing India's Past(COSMOPUBLICATION) ISBN81-307-0087-5
4. Glendinning, Miles The Conservation Movement: a History of Architectural Preservation (ROUTLEDGE2013) 978-0-415-54322-4
5. John H. Stubbs and Emily G. Makas` Architectural Conservation in Europe and the Americas - National experiences and practice ISBN 978-0470603857
6. Jukka Jokhileto A History of Architectural Conservation ISBN 07506 55119

Objectives:

- To give introduction to the soft skills and personality
- To give understanding of and enable better interpersonal communication.
- To apprise of aspects of organisational communication and develop skill in it.
- To enable skill in reading and writing.

Introduction to Soft Skills and Personality

Introduction to Soft Skills. Understanding of self. Self-awareness, self- management and Self Development. Values. Attitude. Positive Thinking and optimism. Confidence and excellence. Developing perception. Patience, persistence and flexibility. Empathy and Emotional Intelligence. Types of stress and stress management. Time Management and overcoming procrastination. Career planning.

Exercises and case studies for the various topics.

Interpersonal Communication

Classification and types of Communication. Verbal and non-verbal communication. Formal and informal communication. Barriers in communication.

Listening Skills, Types of Listening. Enhancing listening. Understanding context of words. Responding. Speaking. Self development through speaking.

Nonverbal Communication. Body language and etiquette. Proxemics. Understanding of cultural, social and economic diversity and adapting to others.

Exercises and case studies for the various topics.

Organisational Communication

Group Communication. Organisational Communication. Communication Breakdown. Conflict Management. Negotiation Skills. Meeting Management. Team Building and Team work. Leadership Skills. Emotional intelligence. Critical Thinking.

Speeches and debates, Combating nervousness and anxiety, Patterns and Methods of Presentation, Oral presentation- Planning and preparation, Making effective presentation. Speaking for various occasions at different scales. Public speaking. Group Discussions.

Exercises for the various topics.

Advanced Reading and Writing Skills

Critical reading and understanding. Reviewing articles and books. Technical explanatory writing. Report writing for project. Structure of scientific/ technical papers. Writing papers for journals and conferences.

Assignments for the various topics.

Course Outcome

CO1 Awareness of importance of soft skills.

CO2 Knowledge and skill in interpersonal communication.

CO3 Knowledge and skill in organisational communication.

CO4 Competency in reading and writing.

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

Assessment Methodology: Three Assessments with weightage of 30%:30%:40% for the first, second and third assessments respectively. Each assessment shall incorporate continuous marking of the work and performance during the particular assessment period. The first, second and third assessment shall be with the proportion of 15:15:20 respectively.

References

1. Soft Skills, K.Alex, S.Chand, 2010
2. Soft Skills, Hariharan S, Sundararajan N, Shanmugapriya S.P, MJB Publishers 2010.
3. The ACE of Soft Skills, Gopalaswamy Ramesh, Mahadevan Ramesh, Pearson 2010.
4. Understanding Interpersonal Communication, Richard West and Lynn H.Turner, Cengage Learning, 2010.
5. Interpersonal Communication, Steven A. Beebe, Susan J. Beebe, Mark V. Redmond, Pearson 2011.
6. Business Correspondence & Report Writing, R. C. Sharma , Krishna Mohan,Tata McGraw Hill, 5th Edition 2017
7. How to Research and write a scientific paper, Robert A. Day, Barbara GasteCambridge University Press 2012.

Objectives:

- The objective is to understand the concept of sacred landscapes, understanding and its connection to religion as a way of living.
- To understand the evolution of sacred towns
- To know relationship between pilgrimage route and architecture
- To extend the knowledge through various case studies
- To enable skills to handle tourism related challenges

Introduction

Concept of sacred landscape – Connection between religion and sacred landscape - Historic/religious cities as sacred landscape - Components of sacred landscapes including built, forest, water systems, etc. – Analysis of sacred landscape.

Evolution of Sacred Town

Historic evolution of sacred towns – Religious aspects of geographical features like rivers, mountains, hillocks, tanks – Development and planning strategies of religious towns – Settlement study – Characteristic features of these towns

Pilgrimage and Architecture

Importance of pilgrimage in various religious contexts – Prominent pilgrimage routes in India – Characteristic of landscape in these towns – Architecture associated with travel – Development of settlements based on natural resource availability.

Religious Town Conservation

Over view of urban development of religious towns in India and Tamil Nadu- understanding the character and issues of historic cities – select case studies of towns like Srirangam, Kumbakonam and Kanchipuram historic districts and heritage precincts.

Tourism Management

Tourism Planning Methods and Analysis, Transport and other Infrastructure planning in tourism development, Urban and Rural based tourism - Tourism as a system- market, function and external factors, Government and tourism policy and priorities, Role of local community and Tourism promotion.

Outcomes:

- CO1** Students shall acquire knowledge about uniqueness of sacred landscapes and its importance in Indian context.
- CO2** Students will learn the evolution of the sacred towns
- CO3** Students will learn the relationship of pilgrimage routes and architecture
- CO4** Assignments will include exploration to analyze the sacredness in a landscape and its uniqueness and its connection to historic core.
- CO5** Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

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. Chakravarthy, Pradeep Thanjavur: A Cultural History, 2010 726.145CHA-T
2. Behera, K.S. Lingraja temple of Bhubaneswar: Art and Cultural Legacy, 2008 726.1450954133BEH- L

3. Filiozat, Vasundhara Kalamukha temples of Karnataka: Art and Cultural Legacy,2012726.145095483FIL-K
4. Jackson, W.J. Vijayanagara Visions: Religious Experience and Cultural Creativity in a South Indian empire, 2007 954.87JAC-V
5. Lin, Jan Power of Urban Ethnic Places: Cultural Heritage and Community Life,2011 307.7608900973 LIN-P
6. Ray,H.P.(ed) Sacred Landscapes in Asia: Shared Traditions, Multiple Histories, 2007 New Delhi: IIC-Manohar

Objectives:

- The objective is to develop skills in management of World Heritage Sites.
- To introduce the role of UNESCO
- To enable students to understand the management policies
- To make them learn strategies through case studies
- To learn conservation concepts from various case studies from India and abroad.

Introduction

Definition and list of World Heritage Sites - UNESCO World Heritage Convention and its implementation, including the processes of inscription and monitoring of World Heritage properties

Role Of UNESCO

Formation of UNESCO – Charters pertaining to WHS – Nomination Criteria – Current state of affairs - theory and practice of conserving natural heritage, i.e. species, ecosystems and biodiversity, and cultural heritage, i.e. monuments, sites and landscapes – Brief discussions on select UNESCO Projects pertaining to conservation

Management Policies

Nomination Dossiers - Funding – Listing of Structures under danger – Inter-relational approach – Intercontinental participation – Directions and Principles – Management hierarchy – Managing selected sites – Local representation - Operational Guidelines – Facilitation requirements – Impact of nomination of World Heritage Site on socio-economic condition of the surroundings.

Protection Guidelines

Conservation activities of UNESCO – Strategies – Planning of phased conservation – conservation guidelines – Community participation - Case Study Abu Simbel restoration – Angkorwat , Cambodia

Case Studies

Select Case studies from India and abroad

Outcomes:

CO1 Students will acquire knowledge about nomination process of World Heritage Site.

CO2 Students will understand the role of UNESCO

CO3 Students will be able to understand the management policies and to apply the knowledge

CO4 Students will learn conservation strategies through various case studies

CO5 Assignment shall include preparation of tentative list document for a given site.

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. Convention concerning the protection of the World Cultural and Natural Heritage: adopted by the General Conference at its 17th session, Paris. UNESCO1972
2. Operational Guidelines for the implementation of World Heritage Convention, World Heritage Centre. UNESCO, 2003.

Objectives:

- The objective is to develop skills towards understanding the need for conservation of energysystems and water ways.
- The focus will be on traditional systems of water management and contemporary methods ofconserving energy.
- It emphasis on the role of sustainability within the historic context at both technical and strategic levels.
- Recognize both the character-defining and inherently sustainable features of a historic building.
- Designing, managing and protecting infrastructure with focus on conservation and sustainability ensuring responsible use of energy and natural resources while protecting the environment for future generations.

Introduction

Aim and purpose of conserving energy and water – Need and objectives – National policies and legislations of the same – Introduction to National and International agencies that works towards conserving energy and water

Introduction to Forms of Energy

Definition, classification and types of energy - Current energy requirements, growth in future energy requirements, Review of conventional energy resources: coal, gas and oil reserves and resources, tar sands and oil shale, nuclear energy - Need for conversion to renewable energy - Sources of renewable energy – Case studies on advantages, disadvantages of Solar, Wind, oceanic & geothermal forms of energy.

Energy Conservation Techniques

Energy conservation and sustainability, principles of energy systems, energy and global environment, scope for energy conservation in architecture- Various methods of energy conservation in architecture, energy conservation techniques in various climates- hot and humid, hot dry, etc., Energy efficient site planning and development, Energy efficient design detailing.

Traditional Methods of Water Conservation

Traditional community wisdom regarding water conservation from different climatic zones of the world - Traditional Architecture of wells in Rajasthan, Gujarat, Tamilnadu – Stepped Wells, Baoris, Pushkarnis, Tanks, etc. Design for water conservation – Building and products - Designing building services, plumbing and sanitary design for effective water reuse, recycling, and recharge -Rain water harvesting techniques – Basic Concepts, piping techniques and pit design for groundwater recharge of wells.

Introduction to Energy Conservation

Conservation of the water cycle as a single system – Conserving water supply, sanitation and drainage systems in neighbourhood - Social imperatives, environmental considerations and economic challenges and Technological options for water conservation, recycling, reuse, conservation and treatment - Planning of settlements and large campuses based on principles of sustainable watersheddevelopment with water as a priority resource. Reuse of grey water for non-potable uses - Wetlands for natural waste water treatment, use of wetlands for natural storm water and vegetated natural roof tops.

Course outcomes:**Students able to**

CO1 Relate and understand the need and importance of conserving energy and water.

CO2 Explaining how sustainability will ensure responsible use of our energy and natural resources while protecting our environment for generations to come.

- CO3 Applying gained technical knowledge about conservation techniques to conserve water and other forms of energy.
- CO4 Analyze the rapidly changing pattern of life and scale of activities and understand the various principles of energy systems and sustainability.
- CO5 Build and emphasis on minimizing energy consumption, demonstrating energy efficiency, adaptation to future climate change and obtaining materials from sustainable sources and avoiding long transportation.

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. Ahmed F. Zobaa Handbook of Renewable Energy Technology
2. John Briscoe, R.P.S. Malik(Ed.)Handbook of Water Resources in India: Development, Management, and Strategies Oxford University Press, 2007
3. K. Nageswara (Ed.) Water Resources Management: Realities and Challenges Eastern BookCorpn., 2006.
4. Robert Brown and Jenny J Gillespie, Micro climatic landscape design – creating thermal comfortand energy efficiency, John Wiley, N.Y, 1995

Objectives:

- The objective of this course is to introduce the students to different types of historic landscape planning principles as found in various parts of world
- The subject will focus on ways to conserve the landscape through various traditional and modern means.
- To address the contemporary challenges that face the sustainable use and conservation of historic landscapes to ensure healthy ecosystems for future generations.
- To identify threats and sensitive landscapes including cultural, or historic landscapes.
- To study appropriate cases where approaches and proposed sustainable solutions are present which are critical to the future development of key economic sectors.

Introduction to Historic Landscape Designs

Introduction to landscape architecture, ecology, ecological balance, landscape conservation - reclamation and restoration of derelict landscapes, environmental impact assessment - Landscape and garden design in history - Japanese, Italian Renaissance and Moghul gardens in India, Study of notable examples, Spatial development in landscape design.

Evolution of Modern Landscape Designs

Industrialization and urbanization – impacts and development of the concept of public, open spaces, open space development in new towns, parks movement, Open space development and its urban design and planning context, Early industrial towns and the garden city movement, Public park as a major component of urban landscape, the works of F.L.Ohmstead, and other pioneers, Open space development and Close conceptual relationship between Town planning, urban design and landscape architecture, Examples.

Modern Movements & Contemporary Concepts

Changing concepts of space and the relationship of architecture to landscape, Study of selected works of modern architects and landscape architects, Post-war development in Europe, The influence of Ian Mcharg on Landscape architecture, The works of Jellicoe, Burle Marx and others, Concept of sustainable landscape development, Cultural landscapes their definition, identification, characteristics, policies, Artistic sensibility in landscape architecture and land art, New development in urban Landscape design.

Sustainable Practices in Landscape Conservation

Need and concept of sustainability, Brundtland report, World Commission on environment and development, sustainable development, sustainable growth, sustainable economy and sustainable use. Visions of sustainability, Source and ethics of sustainability. Sustainability and Climate Change - Sustainable landscape maintenance and management, Conservation and preservation of ecological fragile areas such as wetlands, creeks etc. - Conservation ordinances

Case Studies

Selected case studies on various types of landscape conservation in India and abroad

Course outcomes:**Students should be able to**

- CO1 Relate and understand various historic landscape designs, principles and their development
- CO2 Explain the historic development and growth of various types of landscape planning.
- CO3 Identify various methods of landscape conservation and apply specific methods wherever required.
- CO4 Analyze historic landscapes, their relationship with heritage structures and make informed land management decisions

CO5 Build strategic and integrated plans which are essential for sustaining indispensable landscapes.

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. Anne Simon Moffat and Marc Schiller Landscape design that saves energy William Monow andco.,Inc., New York, 1981
2. Geoffrey and Susan Jellicoe The Landscape of Man Thames and Hudson, 1987
3. John.F.Benson and Maggie.H.Roe Landscape and sustainability John Wiley Publication, NewYork, 2000
4. O.R.Gray Landscape Planning for Energy Conservation

Objectives:

- To introduce to the students the idea of conservation as enhancing quality of life, as effective planning strategy, as means of particularization of place and as a way to address issues of memory and identity.
- To introduce the students to issues and practices of urban conservation at various levels and scales.
- To give an overview of current status of conservation in India.
- To examine the conservation process of maintaining and managing change to a heritage asset in a way that sustains and where appropriate enhances its significance.
- To introduce the student to the various norms and planning tools to improve tourism and urban conservation.

Introduction to Conservation

Understanding Heritage. Types of Heritage. Heritage conservation – Need, Debate and purpose. Defining Conservation, Preservation and Adaptive reuse. Distinction between Architectural and Urban Conservation. International agencies like ICCROM, UNESCO and their role in Conservation

Conservation in India

Museum conservation – monument conservation and the role of Archeological Survey of India – role of INTACH – Central and state government policies and legislations – inventories and projects – select case studies – craft Issues of conservation –conservation project management.

Conservation Practice

Listing of monuments – documentation of historic structures – assessing architectural character – historic report – guidelines for preservation, rehabilitation and adaptive re-use of historic structures – seismic retrofit and disabled access /services additions to historic buildings – heritage site management.

Urban Conservation

Over view of urban history of India and Tamil Nadu – understanding the character and issues of historic cities – select case studies of sites like Thanjavur, Kumbakonam, Kanchipuram, Chettinad – historic districts and heritage precincts.

Conservation and Urban Planning

Norms for conservation of heritage buildings and sites as part of Development Regulations - Conservation as a planning tool – financial incentives and planning tools such as TDR, (transferable development right) – Urban conservation and heritage tourism.

Course Outcomes:

Students able to

- CO1 Relate, be sensitive as well as be informed to carry forth understanding urban conservation in the realm of practice/research.
- CO2 Explain and understand the need and benefits of urban conservation
- CO3 Apply the interrelated policies of urban conservation
- CO4 Analyze the various case studies and understand the essence of the urban setting and conservation process
- CO5 Build knowledge in terms of understanding what norms are applied in specific urban areas or heritage districts.

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. A Richer Heritage: Historic Preservation in the Twenty – First Century by Robert E. Stipe.
2. A.G.K. Memon ed. Conservation of Immovable Sites, INTACH Publication, N.Delhi Seminar/Issue on Urban Conservation.
3. B.K. Singh, State and Culture, Oxford, New Delhi.

4. Bernard Feilden, Conservation of Historic Buildings, 2nd Edition, Butterworth, 1994.
5. Christopher Brereton, The repair of Historic Buildings. Advice on principles and methods; English Heritage 1991.
6. Conservation Manual, Bernard Fielden
7. Donald Apple yard, The Conservation of European Cities, M.I.T. Press, Massachusetts.
8. James M. Fitch, Historic Preservation: Curatorial Management of the Built World by University Press of Virginia; Reprint edition (April 1, 1990)

Objectives:

- The objective is to enhance the knowledge to develop specialization in handling complex management issues.
- To create awareness towards different types of visitors and their needs in finding management solution.
- To understand the process of calculating carrying capacity of Heritage site.
- To introduce the student to visitor management of World Heritage Site
- To understand how tourism and other management issues are solved from examples around the world and India.

Introduction

Managing Heritage Tourism: Concept and Scope - Tourism Impact and problems in India - Common impacts related to visitor use – Visitor Management – Concept of Carrying Capacity – Similarities between carrying capacity and site management planning process – Community based tourism (Or) Understand heritage tourism demand - analyzing the nature of heritage demand - visitor characteristics - visitor typology - their motivations driving to visit heritage sites.

Visitor Management

Identification of different types of visitors - Formal and informal tourists - Pilgrimage and its linkage to cultural tourism - Organization and traditional facilities for visitors - Visitor needs and expectation - Infrastructural requirements - Critical consideration for visitor management

Carrying Capacity

Visitors Data - Future projection of visitors to the site - Impact of visitors on Heritage Site - Calculating of threshold of Heritage site towards visitors to the site - Identifying Indicators - Calculating carrying capacity

Managing Tourism at World Heritage Sites

World Heritage Sites in India – Problems and Prospects of Cultural/ Natural Tourism in India – Sustainable tourism Policy and strategy Development – Relationship between World Heritage and Sustainable Tourism - National Tourism Policy, 2002 – Guidelines for Tourism and Visitor Management in Protected Areas – Action plan for sustainable tourism development

Case Studies

Select Case studies from India and Abroad (or) International and National Case studies of Sustainable Tourism.

Course Outcomes:

students able to

CO1 Relate and acquire knowledge about visitors and finding management solution.

CO2 Explain and understand the need for historical tourism management

CO3 Apply and calculate the carrying capacity for a heritage site.

CO4 Analyze and contextualize the relationship between sustainability and visitor management

CO5 Build and work out infrastructural requirements for visitors

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. Timothy, D. J. (2021). Cultural Heritage and Tourism: An Introduction (Volume 7) (Aspects of Tourism Texts, 7) (2nd ed.). Channel View Publications.

2. Leask, A., & Yeoman, I. (1999). *Heritage Visitor Attractions: An Operations Management Perspective* (1st ed.). Cengage Learning EMEA.
3. *The Challenge of Tourism Carrying Capacity Assessment: Theory and Practice (New Directions in Tourism Analysis)* by Alexandra Mexa (28-Apr-2004) Hardcover. (2021). Ashgate Publishing Limited (28 April 2004).
4. Arthur Pedersen. (2002, November). *Managing Tourism at World Heritage Sites: a Practical Manual for World Heritage Site Managers*. UNESCO publication.
5. Comer, D. C. (2012). *Tourism and Archaeological Heritage Management at Petra*. Author(s).

Course Objectives

- To introduce general concepts of learning theory.
- To help understand research related to theories of learning.
- To enable opportunity to engage in critical analysis of theories through discussions.

Introduction

Introduction to learning. Behaviourism - Classical and Operant. Social Learning Theory. Taxonomies. Mastery Learning. Cognitive Information Processing. Problem Solving, Transfer. Meaningful Learning. Situated Cognition. Development and Learning. Interactional Theories of Learning. Nature and Meaning of Psychology. Methods and Scope Psychology.

Educational Psychology

Nature and Meaning of Educational Psychology. Functions Educational Psychology. Physical, Social, Emotional and Cognitive development patterns. Stage. Specific Characteristics of Infancy and Childhood and their developmental tasks. Characteristics and Problems of Adolescents. Needs, aspiration, attitudes and Self-concept of Adolescents. Guidance and Counselling for adolescents.

Understanding Learner Stages of Human Development

Cognitive Development. The Self, Social, and Moral Development. Learner Differences and Learning Needs. Language Development. Language Diversity and Immigrant Education. Culture and Diversity, Behavioural Views of Learning. Cognitive Views of Learning. Complex Cognitive Processes.

Learning and Motivation

Concept of learning and its nature. Factors influencing learning – Personal and Environmental. Motivation – Nature, Types. Techniques of enhancing learner's motivation. Theory of Learning. Operant Conditioning theory of learning. Gestalt theory of Learning. Learning goals with classroom activities, create motivating and inclusive environments, and integrating assessment into learning. Frameworks like Backward Design. Effective teaching and learning frameworks from psychological, cognitive, sociological, and educational research.

Appreciation And Criticism

Ability of Understanding– appreciation, advocatory, descriptive, evaluative, interpretative and other evaluation criteria and methodology. Development of Design Thoughts-understanding, developing and expressing a design thought in its right perspective purpose, manner and mode. Theories and models for experiencing architecture.

Course Outcomes

- CO1 Knowledge about major social and psychological processes involved in learning and development in an educational setting.
- CO2 Ability to engage in knowledgeable and productive dialogue with colleagues about human learning, development, and educational practice.

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. Ellen D. Gagne, Carol Walker Yekovich, Frank R. Yekovich, 'The Cognitive Psychology of School Learning', Pearson, 1997.
2. Derville, Leonore, M.T, 'The use of Psychology in Teaching', Longman London, 1982.
3. Biggs, Jhon B, 'The Process of Learning', Pearson Higher Education, 1993.
4. McShane, J, 'Cognitive Development, An Information Processing Approach Basic', Black Well, Oxford, 1991.
5. Glover, J.A and Bruning, 'Educational Psychology Principles and Applications, Pearson, 1990.
6. Dececco J.P, 'Psychology of Learning and Instruction: Educational Psychology', Prentice Hall of India Ltd, NewDelhi, 1970.
7. Herbert J. Klausmeier, Richard E. Ripple, 'Learning and Human Abilities: Educational Psychology', Joanna Cotler Books, 1975.
8. Carol Davidson Cragoe, 'How to Read A Building', Rizzoli, 2008.

Objectives:

- The objective is to develop skills towards Heritage Impact assessment to assess the impact of development on heritage in various conditions.
- To introduce students to assessment of cumulative impacts and assisting in raising awareness for protection of OUV
- To give an overview of the methodology of Impact Assessment
- To study and understand the principles of Impact Assessment.
- To understand the impact of development on the historic value.

Introduction

Definition of heritage – Factors that impact heritage – Internal and external factors – results of impact

Methodology

Methods of assessment – Documentation – Interviews – Visual analysis – Lab testing – Material and Structural analysis – Photography Techniques – Compilation of collected data – Scientific methods

Assessment Tools

Qualitative and quantitative assessment – OUV for World Heritage Sites – Threats at Regional, National and Global level – means to safe guard at various levels – Monument Management – safety and security

Case Study and Report Writing

Choosing, analyzing and presentation of a HIA for a structure/site – Collecting data – Investigation of the selected site – HIA report writing

Guidelines For HIA

Programming and guidelines as prescribed by National and International agencies like ASI – ICCROM, ICOMOS - UNESCO

Course outcomes:

Students able to

- CO1 Relate to Heritage Impact Assessment and use it as a tool for evaluating impacts from various factors affecting heritage
- CO2 Explain and gain knowledge on the principles and methodology used for the assessment
- CO3 Apply the acquired skills towards Heritage Impact Assessment.
- CO4 Analyze through case studies and reports of World Heritage Sites
- CO5 Build reports, drawings and presentation

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. ICOMOS, ICOMOS guidelines for cultural world heritage properties, Jan, ICOMOS publication, 2011.
2. ICOMOS, A Cultural heritage assessment of the impact on the outstanding universal value of the Greenwich maritime world heritage site, ICOMOS publication, 2010.
3. Stovel, H, Risk Preparedness: A Management Manual for World Cultural Heritage ICCROM, ICCROM publication 200

Objectives:

- The objective is to train and develop skills for Disaster Management of Cultural resources.
- To introduce the student to the basic understanding of disasters and its relationship with development
- To enhance awareness of Disaster Risk Management organizations and processes in India
- To understand impacts of disaster and processes used to recover from them
- To understand Rehabilitation and Reconstruction

Introduction

Introduction to Disaster Management - Analyze the vulnerability of cultural heritage for physical, socio-economic and political risks– Risks to Cultural Resources during disasters.

Disaster Management

Natural Hazards and risk preparedness – global, regional and Indian Context and international cooperation - prevention, mitigation and preparedness - Disaster response relief and recovery- Protecting Heritage in times of conflict and other emergencies.

Disaster Mitigation in India

National Disaster Management System of India – Precaution to prone areas – Disaster assessment and estimation of loss – Techniques and Strategies for mitigating risks to cultural heritage - Agencies for rehabilitation of structural damages and rebuilding of structures – Role of NGOs

Post Disaster Mitigation

Planning for post-disaster recovery of cultural heritage – Training craftsmen and artisans for rehabilitation of structures in such situations – role of government in the post disaster period

Case Study

Selected case study of architectural and cultural rehabilitation for structures post natural disasters from India and abroad

Course outcomes:

Students Should be able to

CO1 Relate and understand the various types of disasters and risks it poses to cultural heritage

CO2 Explain the various precautions and measures taken based on the vulnerability of heritage

CO3 Apply the understanding of disasters and create prior assessments and valuations

CO4 Analyze what can be done for post disaster mitigation measures

CO5 Build case studies in the form of reports, site visit report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material.

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. Harsh K. Gupta, Disaster management, ISBN: 8173714568.
2. Powell, Kenneth, Architecture Reborn: Converting Old buildings for New Uses, Rizzoli, University of Michigan, 1999.
3. Stratton, Michael, Industrial Buildings: Conservation and Regeneration, Taylor and Francis, 2009, ISBN:1135807817.

Objectives:

- This course discusses the conceptual framework of the critical area of the economics of heritage, and its centrality for heritage resource management and sustainable development.
- The course covers techniques of cost-benefit analysis and economic viability for individual historic sites and historic housing, urban conservation, cultural landscapes.
- To understand the role of historic preservation in economic development
- It seeks to identify a finite number of indicators that can be used to regularly, consistently, meaningfully and credibly measure the economic impact of Historic preservation over time.
- To understand the positive impact of historic preservation on the economy through case studies

Introduction

Economic sustainability for heritage conservation: Basic economic concepts related to heritage, creating bridges between heritage and economics, economic mechanisms for the implementation of heritage conservation from policies to projects.

Understanding Heritage Resources

Concepts of Cultural Capital: Core issues and techniques that determine value embodied in or generated by heritage resources; Types of values of heritage, Measurement and quantification of costs and benefits of heritage conservation in economic terms.

Evaluations of Heritage Resources and Financing

Non-market evaluation techniques for Heritage resources – Travel Cost, Contingent Valuation, Hedonic Pricing, Combined Methods, Choice Modelling - Problems and issues of funding heritage conservation, and Existing programmes for financing

Case Studies: Based on Economic Viability

Assessment of economic viability of conservation projects: National & International case studies

Casestudies

Project on valuation of heritage resources – Case studies of innovative conservation financing mechanisms and programmes.

Course Outcomes:

Students should be able to

CO1 Relate and understand the importance of economics with respect to heritage

CO2 Explain and gain knowledge of evaluating heritage resources and preservation as an economic tool.

CO3 Applying economic methods to historic preservation, when there is a mix of cultural and economic values embodied in the preservation activity.

CO4 Analyze the effects of historic preservation investment on a regional economy.

CO5 Build case studies in the form of reports, reviews and tutorials with suitable illustrations.

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. Economics of Historic Preservation: A Community Leader's Guide by Donovan D. Rypkema
2. Measuring the Economics of Preservation – Full Report, Recent Findings & Executive Summary by Advisory Council of Historic Preservation, 2011
3. The Economics and Finance of Cultural Heritage: How to Make Tourist Attractions a Regional Economic Resource by Vincenzo Pacelli
4. Handbook on the Economics of Cultural Heritage by Edited by Ilde Rizzo, Professor of Public Finance, University of Catania, Italy and Anna Mignosa, Assistant Professor of Economics, University of Catania, Italy and Erasmus University Rotterdam, the Netherlands

Course**Objectives**

- To give familiarity about theories of architectural education.
- To introduce the idea of cognition development.
- To give familiarity about ways of thinking and learning with respect to architecture.

Introduction

Overview of the important aspects of the discipline of architecture. Nature of Architectural Education based on the nature of the discipline of architecture.

Tools/ Techniques to Teach Architecture

Models and methods of Teaching. Teaching Aids In Architecture Education. Types of Teaching Aids- Visual, Audio, etc., Learning by Doing, reflection, exploring, arguing, incidentally. Case-Based Teaching. Advanced Organizer, Concept attainment model, Simulations.

Synergetics as a Model of Teaching.

The essence of creativity in synergetics. Use of synergetics in the design studio. Techniques of teaching-learning: Maxims of teaching and its application to subjects of architecture. Concept mapping, creating concept maps. Basic aspects of classroom management.

Student Development

Need of development. Cognitive Development. Connection between seeing and remembering. Memory Retention. Attention Span. Organizing Communication. Comprehension. Create a Focal Point. Evolution of technology in education. Testing of module/ survey conducted.

Learning In Architecture Design Studio

Development of Critical, Creative and Pragmatic Thinking in Architectural Design Studio. Bloom Taxonomy in Design Studio. Qualities which can be attained at various stages in Architectural Design Studio.

Course Outcome

- CO1** Awareness of the importance of contextual excellence in architectural design and methods for the same.
- CO2** Knowledge about and ability to integrate interdisciplinary and cognitive aspects of learning, teaching and development.

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. S. K. Mangal, 'Essential of Educational Technology', PHI Learning Pvt. Ltd., 2009.
2. Bruce Joyce, Emily Calhoun, Marsha Weils, 'Models of Teaching', Pearson, 2014.
3. Klausmier, Ripple, 'Learning and Human Abilities' Harper and Row, New York, 1971.
4. Eames Charles, Ray, 'An Eames Anthology', Yale University Press, 2015.