MASTER'S PROGRAMME

IN ARCHITECTURAL CONSERVATION

SYLLABUS 2016

DEPARTMENT OF ARCHITECTURAL CONSERVATION

SCHOOL OF PLANNING AND ARCHITECTURE, NEW DELHI

INTRODUCTION

Context and concerns

Architectural heritage, integral to our syncretic and plural cultural identity, and a repository of invaluable knowledge systems, constitutes an irreplaceable resource. Going beyond conventional perceptions of 'monuments', this heritage encompasses living habitats and historic environments, both urban and rural, that are undergoing rapid transformation due to development models which see heritage as a burden, rather than an asset that needs to be protected and nurtured for future generations. In order to ensure a more equitable and culturally sustainable development trajectory for India, it is important that this heritage be conserved and managed in a manner that enhances the quality of life in historic settlements. For this, rigorous academic training which supports professional interventions to safeguard this heritage, as well as informed community advocacy and participation are an imperative.

The Department of Architectural Conservation was established in 1986 and was the first post graduate programme in India to offer a degree in Architectural Conservation. Over the years it has had a pan India presence, reflected in the representation of students from all over India, who have gone on to make significant contributions towards shaping the conservation profession. The course curriculum has since evolved to take into account the changing realities of heritage conservation in India and the world. It is our endeavour that the academic programme continues to contribute to the development of the profession and make a qualitative difference in the improvement of the habitat we inhabit. The programme is in consonance with the international guidelines for training of conservation professionals.

Objectives

The objectives of the Masters in Architectural Conservation course are:

1. To expose students to the multidisciplinary and interdisciplinary nature of conservation, so as to ensure students develop skills required to function as responsible professionals. This will equip students to develop models of sustainable integrated conservation addressing the complexities of historic buildings, heritage cities and cultural landscapes in India. The course recognizes that integrated and holistic approaches are vital for inclusion of heritage into mainstream development processes.
2. To stimulate and encourage development of rigorous and innovative methodologies of intellectual enquiry and research into the field of Architectural conservation through adoption of a combination of pedagogic methods which include studio exercises, laboratory experiments, special lectures, site visits and tutorials.
3. To focus on challenging real world conservation issues through site based studio exercises and 'hands on' practical experience in conservation through site visits, workshops and the summer

training. This addresses all scales of heritage, through emerging theoretical, technical and management subjects, ensuring that students develop the ability to connect philosophy, theory and practice; and devise realistic, implementable and innovative conservation interventions.

4. To familiarise the students with the state of the art techniques in material conservation through laboratory experiments and laboratory exercises that contribute to improved conservation practices and processes on site.
5. To encourage inter-institutional collaboration with other academic and professional institutions and interaction with government bodies so as to contribute to effective policy making in conservation; and through grounded research strengthen the profession, and increase awareness regarding the discipline of conservation.
6. To encourage community outreach, and enhance academic interface with civil society and communities for a more broad based and rooted participatory approach towards conservation of our heritage assets.

Pedagogic methods:

The pedagogic methods adopted in the course curriculum are:

1. Classroom lectures: Stimulating, well structured, interactive lecture courses with presentations and discussions to familiarize students with core concepts, techniques and methods of heritage conservation necessary for developing professional skills.
2. Special lecture series: Focusing on Case studies and best practices to highlight real-world challenges and innovative, realistic conservation interventions in both the Indian and the International context; intended to sensitise students and develop capacity for assessment of outcomes and evaluation of best practices as well as failures.
3. Studios: Site based guided, 'immersive' studio exercises, with specialist inputs to develop skills for documentation, analysis and holistic understanding of complexities of heritage buildings, sites, settlements and landscapes; and development of sustainable conservation interventions and management frameworks.
4. Field visits: Supplement classroom lectures and relate theory and research with practices and existing situation on the ground; Develop nuanced 'on site' understanding of historic sites, archaeological areas and living traditional environments, and complexities and challenges of conservation.
5. Laboratory: Supplement class room lectures for better scientific understanding of historic building systems.
6. Summer training: Hands on, experiential learning on different aspects of professional practice, under supervision of qualified conservation professionals.
7. Assignments/Self study/Guided tutorials: Linked with classroom courses, supervised and guided by faculty and external specialists.

Framework and Structure:

With the adoption of the credit system the course follows the framework adopted by the school.

Core: subjects essential to the discipline of Conservation and offered in the department.

Elective: subjects offered by the department and other departments of the school linked to the discipline of conservation; allows flexibility within the core curriculum and possibility of additional credits.

Skill enhancement: subjects offered at the institutional level for acquiring additional professional skills.

CORE SUBJECTS

The Architectural Conservation Core Course is structured around five modules:

Module 1: Conservation philosophy

Module 2: Conservation principles and practices

Module 3: Conservation science, techniques and technology

Module 4: Conservation management

Module 5: Conservation Studio

Module 1: Conservation philosophy:

The module prepares the student of Architectural Conservation to develop a philosophical understanding and approach towards conservation through understanding of history and architecture, as they are two subjects that underpin the discipline of architectural conservation. The module evolves in the second semester to focus on linkages of heritage with society and understanding of community based heritage conservation. The module culminates in the third and fourth semester in a research paper, where the student applies her comprehension of the subject to a research topic linked with the thesis.

Module 2: Conservation principles and practices:

The module focuses on the basic theories in the practice of conservation, an understanding of which is vital for responsible conservation of architectural heritage. It includes an introduction to the evolution of theories in conservation, and an introduction to planning theories and practice. The module develops in the later semesters to integrate conservation with the domains of archaeology, cultural landscapes and heritage tourism.

Module 3: Conservation science, techniques and technology

The module emphasizes the technical aspects of the methodical study and development of appropriate conservation interventions for historic building systems. The courses on building materials and structural systems are supported by laboratory exercises. The module focuses on retrofitting and adaptive reuse in the second semester, culminating in the six week summer training, where students get a 'hands on' experience of working on historic buildings. This may be taken forward by students in their thesis topics related to conservation techniques.

Module 4: Conservation management

The module is designed to train students to have an integrated, participatory and decentralised approach for heritage management. While exploring international management systems, it focuses on the Indian context and dwells on all levels of management, from building sites to settlements. It also exposes the students to various aspects of heritage jurisprudence and the economics of heritage conservation to enable better management of heritage sites. The module concludes in the final semester with a heritage management seminar, linked to the thesis.

Module 5: Conservation Studio

The studio exercises are planned to address the increasing complexities and scale in heritage conservation, giving the students an opportunity to apply their theoretical understanding into practice. The first semester focuses on a building and area level project, expanding to a historic settlement level in the second semester. The third semester selects a legible cultural landscape or a complex historic urban landscape having a very visible component of natural heritage. The fourth semester is devoted to a self initiated thesis graduation project.

SKILL ENHANCEMENT: The Skill enhancement subjects help students to acquire basic skills necessary for professional practice. Subjects include Communication skills, GIS basic and GIS advanced (heritage application) offered in the first two semesters.

ELECTIVES: A range of electives are offered to the students from within the department and from other departments, linked to the discipline of conservation, to underscore the interdisciplinary nature of conservation. The electives offered by the department in the second and third semester will introduce students to the recent and emerging developments in the field of conservation, e.g. Adaptive reuse and retrofitting of heritage structures; Heritage management systems in India and abroad; Museology; Conservation of Historic gardens; Professional practice; Disaster management and Risk preparedness; Heritage Impact assessment.

SUMMARY TABLE

MODULE	SEMESTER 1		SEMESTER 2		SEMESTER 3		SEMESTER 4	
SKILL ENHANCEMENT (**SE**)	**SE1a** Communication skills(*ncr*) **SE1b** GIS basic	**1hr** **2hr**	**SE 2** GIS advanced (heritage applications) (*ncr*)	**2hr**				
CORE								
Conservation philosophy (**CP**)	**CP1** Foundation course (2 units): Creative thinking; History theory and criticism	**2hr**	**CP 2** Emerging paradigms	**1hr**	**CP 3** Research paper I	**2 hr**	**CP 4** Research paper II	**2 hr**
Conservation principles and practices (**CPP**)	**CPP1a** History & theory of conservation **CPP1b** Planning for conservation	**1hr** **2hr**	**CPP 2a** Cultural landscapes **CPP 2b** Archaeology *(SV 2 hr)*	**1hr** **1hr**	**CPP 3** Heritage tourism	**1 hr**	---	
Conservation science, techniques and technology (**CST**)	**CST1a** Building materials and structural systems I (2 units) **CST1b** Conservation lab *(SV 1 hrs)*	**2hr** **1hr**	**CST 2** Building materials and structural systems II *with conservation lab*	**1hr**	**CST 3** Summer training	**2cr**	---	
Conservation management (**CM**)	**CM1** Management of Historic building systems *(SV 1 hr)*	**2hr**	**CM 2a** Integrated urban conservation **CM 2b** Heritage law and jurisprudence	**1hr** **1hr**	**CM 3** Heritage economics	**1hr**	**CM 4** Management Seminar	**2hr**
Conservation studio (**CS**)	**CS1** Studio	**12hr**	**CS 2** Studio	**12hr**	**CS 3** Studio	**12hr**	**CS 4** Thesis studio	**12hr**
ELECTIVE (**E**)			Elective (dept) Elective (other depts)	**2hr** **2hr**	Elective (dept) Elective (other depts)	**2hr** **2hr**		
Total hours		25 hr		24hr		20hr		16hr
Total credits		**24cr**		**22cr**		**22cr**		**16cr**

TOTAL COURSE CREDITS: 84cr

Non credit time	Site visits(*SV*)	2 hrs	Site visits	2hrs				
	Special lecture	2 hrs	Special lecture	2 hrs	Special lecture	2 hrs	Special lecture	2 hrs

ncr : non credit hours
SV : site visits

EVALUATION FRAMEWORK

SEMESTER 1						
Module	Subjects	Hours/week	Marks			Credits
			internal	external	Total	
SKILL ENHANCEMENT						
SE **Skill enhancement**	**SE1a** Communication skills(*ncr*) **SE1b** GIS basic	**1hr** **2hr**	--- 50	--- 50**	--- 100	Non credit 2cr
CORE						
CP **Conservation philosophy**	**CP 1** Foundation course	**2hr**	50	50	100	2cr
CPP **Conservation principles and practices**	**CPP1a** History & theory of conservation **CPP1b** Planning for conservation	**1hr** **2hr**	25 50	25* 50	150	1cr 2cr
CST **Conservation science, techniques and technology**	**CST1a** Building materials and structural systems I **CST1b** Conservation lab *(+SV 1 hrs)*	**2hr** **1hr**	50 25	50 25***	150	2cr 1cr
CM **Conservation management**	**CM1** Management of Historic building systems *(+SV 1 hr)*	**2hr**	50	50	100	2cr
CS **Conservation studio**	**CS1** Studio	**12hr**	300	300	600	12cr
ELECTIVES						
Elective (department)						
Elective (other departments)						
TOTAL		**25 hr**	**600**	**600**	**1200**	**24cr**
Special lectures		2hr				Non credit
Site visits (*SV*)		2hr				Non credit

*Seminar **Practical project ***Laboratory practical

SEMESTER 2						
Module	Subjects	Hours/week	Marks			Credits
			internal	external	Total	
SKILL ENHANCEMENT						
SE **Skill enhancement**	**SE2** GIS advanced (heritage applications) (*ncr*)	**2hr**	---	---	---	Non credit
CORE						
CP **Conservation philosophy**	**CP2** Emerging paradigms	**1hr**	25	25*	50	1cr
CPP **Conservation principles and practices**	**CPP2a** Cultural landscapes **CPP2b** Archaeology *(SV 2 hr)*	**1hr** **1hr**	25 25	25 25	 100 	1cr 1cr
CST **Conservation science, techniques and technology**	**CST2** Building materials and structural systems II and laboratory	**1hr**	25	25*	50	1cr
CM **Conservation management**	**CM2a** Integrated urban conservation **CM2b** Heritage law and jurisprudence	**1hr** **1hr**	25 25	25 25	 100 	1cr 1cr
CS **Conservation studio**	**CS2** Studio	**12hr**	300	300	600	12cr
ELECTIVES						
Elective (department)		**2hr**	50	50	100	2cr
Elective (other departments)		**2hr**	50	50	100	2cr
TOTAL		**24hr**	**550**	**550**	**1100**	**22cr**
Special lectures		2hr				Non credit
Site visits (*SV*)		2hr				Non credit

*Seminar

SEMESTER 3						
Module	Subjects	Hours/week	Marks			Credits
			internal	external	Total	
SKILL ENHANCEMENT						
SE **Skill enhancement**						
CORE						
CP **Conservation philosophy**	**CP3** Research paper I	**2 hr**	50	50*	100	2cr
CPP **Conservation principles and practices**	**CPP3** Heritage tourism	**1 hr**	25	25	50	1cr
CST **Conservation science, techniques and technology**	**CST3** Summer training	**---**		100	100	2cr
CM **Conservation management**	**CM3** Heritage economics	**1hr**	25	25	50	1cr
CS **Conservation studio**	**CS3** Studio	**12hr**	300	300	600	12cr
ELECTIVES						
Elective (department)		**2hr**	50	50	100	2cr
Elective (other departments)		**2hr**	50	50	100	2cr
TOTAL		**20hr**	**500**	**600**	**1100**	**22cr**
Special lectures		2hr				Non credit
Site visits (*SV*)						

*Seminar

SEMESTER 4						
Module	Subjects	Hours/week	Marks			Credits
			internal	external	Total	
SKILL ENHANCEMENT						
SE Skill enhancement						
CORE						
CP Conservation philosophy	**CP4** Research paper II	**2 hr**	50	50*	100	2cr
CPP Conservation principles and practices	---	---				
CST Conservation science, techniques and technology	---	**---**				
CM Conservation management	**CM4** Management Seminar	**2hr**	50	50	100	2cr
CS Conservation studio	**CS4** Thesis studio	**12hr**	300	300	600	12cr
ELECTIVES						
Elective (department)						
Elective (other departments)						
TOTAL		**16hr**	**400**	**400**	**800**	**16cr**
Special lectures		2hr				Non credit
Site visits (*SV*)						

*Seminar

FIRST SEMESTER

SE: SKILL ENHANCEMENT

SE1a: COMMUNICATION SKILLS

Objectives: The focus is on enhancing skills which are vital for oral, written and visual communication, specific to heritage conservation. This course enables the students to present professional content with clarity to a range of stakeholders and decision makers.

Course content:

- Effective oral and written communication.
- Communication principles.
- Sketching, field notes and mapping.
- Conversion of empirical data to graphic expression.
- Standard representation and standard graphic conventions in visual and written formats.
- Digital communication.
- Innovative presentation techniques: Manual and Computer aided technical presentation and drawings.

Pedagogic methods and assessment: Lectures, studio linked exercises. Assignments will focus on site based tutorials in heritage areas.

SE1a	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	none	1	16	---	---	---	----	----

SE1b: GIS BASIC

Objectives: The objective of the course is to develop an understanding of the basic GIS techniques, the range of analyses and their applications in various fields of design and planning.

Course Content:

- Fundamentals of GIS: Concept of GIS, Components of GIS, Data Structure of GIS
- Geo-referencing: Satellite imagery and topographical sheet; Perform map to map, and image to map transformation.
- Spatial and Non Spatial Data Creation: Create Geo-database, Feature Dataset and Feature Class.
- Editing Features: Fixing errors by topology and other editing tools
- Spatial Data Query, Attribute Data Query
- Vector Data Analysis: Perform buffering and overlay
- Spatial Analysis: Preparing for analysis; Accessing Spatial Analyst and Data Exploration.

- Raster Data Analyst: Perform a local operation; perform a combine operation; perform a neighborhood operation; perform a zonal operation.
- Data Display and Cartographic Representation: Make a Choropleth Map.
- GIS Models and Modeling: Creating and Executing tools in Model Builder.
- 3D Analysis: Creating Contours, Slope, Aspect, Relief.
- Conversion of GIS data into various formats: Conversion of GIS data into CAD, KML format etc.

Pedagogic methods and assessment: The course will be a taught course supplemented by practical exercises linked to the studio.

SE1b	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2cr	2	16	16	---	50	50	100

CORE

CP: CONSERVATION PHILOSOPHY

CP1: FOUNDATION COURSE

Objectives: This course helps students to develop their critical thinking skills intended for greater understanding of heritage resources. It emphasizes on analysis and interpretation of heritage resources, and encourages students to adopt new ways of seeing.

Course content:

UNIT I: CREATIVE THINKING

- Working of a human mind, process of information collection, etc. The different ways of thinking and seeing: linear and lateral thinking, visual thinking, creative thinking for heritage conservation.
- Theory of Knowledge and objective knowledge in relation to heritage assets. Introduction to mathematical logic and scientific research. Theories, ways of judging a theory, validation of new theory, paradigm shift.
- Language as communication system, sign symbols and meanings; human language, ethnography of language.
- Methodologies and frame work that govern the study of Indian civilizations .Culture areas, civilizational studies and changing cultures.

UNIT II: HISTORY, THEORY AND CRITICISM

- Ways of Understanding political and cultural history.
- Historiography, writers of history, of art and architecture and their interpretations.

- Historic architecture, oral history and living traditions as a source of knowledge; from 'stylistic' analysis to knowledge systems approach.
- Introduction to architectural history, theory, and criticism. Development of architectural history as a subject.
- Methods in examining architectural and urban history: subjective and objective analysis, stylistic and typological analysis, anthropological approach, phenomenological approach, sense of place.
- From philosophy to building, landmark buildings representing the spirit of an age. Great architects, philosophers in history eg. Brunelleschi, Bramante, Sinan, Michelangelo, Shahjahan, Gandhi, Rabindranath Tagore, Wittgenstein, Kevin Lynch, Christopher Alexander, and others; and building theories attributed to them.
- Art and Architectural movements. Philosophical and literary impacts on architectural idioms and forms.

Pedagogic methods and assessment: Lectures and tutorials.

CP1	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2cr	2	12	4	---	100		100

CPP: CONSERVATION PRINCIPLES AND PRACTICES

CPP1a: HISTORY AND THEORY OF CONSERVATION

Objectives: This course introduces the students to personalities, ideologies and philosophies that helped formulate the evolving principles and theories of conservation. It acquaints the students with national and international normative frameworks for conservation.

Course content:

- Rationale for conservation.
- History of conservation movements in India and World View. Pioneers of conservation: Viollet Le Duc, John Ruskin, William Morris, and others.
- Scope, principles and approaches to conservation: from material based to value based to living heritage approach.
- Definitions and terminologies: historicity, values, authenticity, preservation, restoration, transformation, conservation etc. including traditional vocabularies for conservation.
- Interventions in conservation such as reuse, rehabilitation, upgradation, retrofitting, revitalization, regeneration, and redevelopment of historic areas and cities.
- International and National approach to conservation: Role of UNESCO, other allied bodies and institutions, ASI, INTACH. World Heritage sites and nomination processes.

- Charters and guidelines: relevance of key international charters as codes of practice in conservation: critique and evaluation. Burra charter, INTACH Charter and others.

Pedagogic methods and assignments: Lecture course supplemented by student seminars and assignments.

CPP1a	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1cr	1	16		---	25	25	50

CPP1b: PLANNING FOR CONSERVATION

Objectives: This course introduces the students to the primary planning subjects that impact heritage resources. It will acquaint the students with tools and techniques to integrate conservation within planning frameworks; and that students, as part of multidisciplinary teams, ensure informed heritage sensitive planning decisions.

Course content:

- History of regional planning in India; Region as comprehensive physical planning unit: concepts, criteria for identification, types: planning region, resource region, cultural region etc.
- The theory of regional settlement patterns, urban – rural continuum and changing relationships.
- Delineation of city regions: Greater London Plan, NCR, Backward regions and their planning, District planning processes in India.
- Demographic Studies: Concept of demography, census, migration dynamics, population projections. Statistical method for understanding demographic patterns.

- The definitions and principles of environmental and ecological planning. Elements and components of environment, environmental factors determining settlement structure, causative factors for environmental degradation.
- Environmental Zones – Hills, arid, coastal, flood plains etc.
- Environmental planning models for regions, cities, addressing concerns of the socioeconomic and cultural environment, in relation to ecosystems,to ensure sustainable development patterns.
- Environmental Impact Assessment.
- Govt. of India Policies for environment (forests, wildlife, hill, biosphere, wetlands, wastelands, oceans etc.), Eco sensitive zones, Climate change imperatives.

- Urban Planning objectives and introduction to urban planning terminologies. Type of plans and plan hierarchies, urban planning process in India. Integration of conservation in Master plans, Zonal plans and Local area plans.
- Planning and Development laws and institutions: Participatory planning frameworks.

- Tools and techniques in urban planning: standards and surveys, URDPI Guidelines.
- Understanding planning provisions with specific focus on heritage.
- Overall housing scenario and impact on historic housing stock. Policies, finance and Legislation in National Context for the Housing Sector: Historic and vernacular housing in India, its status and potential for future housing needs. Slum act, Slum policies, Rent Control act, and existing incentives: implications on the historic housing stock.
- Housing in historic areas and imperatives for conservation. Case studies of informal housing in historic areas, Historic housing improvements in Bombay etc.
- Policies and programs: revitalization, retrofitting and resilience, redevelopment, slum designation/clearance; HRIDAY, Housing for all, Smart cities.
- Introduction to transport planning, tools and techniques. Heritage areas and traffic control: Impact of rapid transport systems on heritage areas. Pedestranization in historic areas.
- Traffic management in historic Cities/ Areas: at Regional and Local scale.

Pedagogic methods and assessment: Lectures and assignments linked to various planning tools and techniques and their application to integrated conservation.

CPP1b	CREDIT	HRS/WK	LECTURES	TUTO.	SITE VISITS	IN.MARKS	EX. MARKS	TOTAL
	2cr	2	16	-------	---	50	50	100

CST: CONSERVATION SCIENCE, TECHNIQUES AND TECHNOLOGY

CST1a: HISTORIC BUILDING MATERIALS and STRUCTURAL SYSTEMS I

Objectives: This course provides an introduction to the practical and technical aspects of the methodical study of historic building systems and related conservation techniques. This includes details of the characterization and behavioral aspects of materials ; structural performance of historic buildings, deterioration processes and conservation interventions. The course is supplemented with the conservation laboratory which provides opportunities for developing techniques of sample collection, sampling and testing of building materials.

Course content:

UNIT I

- Traditional building materials used in India, from pre historic times till date: Earth, clay, stone, brick, timber, bamboo, lime, iron, metals and glass.
- Materials used in structural, non – structural and decorative applications: mortars, renders, paints and plasters, additives and stabilizers.
- Categorization of materials as organic and inorganic, mixture of both and compound materials: physical, chemical and mechanical properties.
- Common binding materials, their properties and techniques of preparation.

- Process of Identification of defects: Field investigations, field-tests, Standard test methods, equipment used for detecting and measuring common problems in historic buildings.
- Diagnosis and assessment of defects and common problems in historic building materials.
- Remedial measures for common material defects in historic structures.
- Cleaning and maintenance of Historic building fabric.

UNIT II

- Introduction to historic building technology, structure and construction systems.
- Problems in Historic buildings due to alteration in material properties and performance.
- Theory of structures and analysis of structural components of historic buildings : Load transfer systems, support systems, spanning systems, infill material , strength and weakness of traditional building technologies and composite structural systems (foundations, arches, domes, vaults, columns, beams, roofing etc).
- Common Structural defects in historic buildings, cause and nature of distress : types of cracks, differential settlement, geo-technical issues.
- Methodologies for inspection and diagnosis of structural defects: Introduction to various types of tests such as Destructive Tests (DT), Minor Destructive Tests (MDT), Non Destructive Tests (NDT). Monitoring techniques.
- Structural analysis techniques.
- Conservation of historic building: Immediate temporary emergency measures for distressed buildings: shoring, underpinning, shuttering etc. Stabilization, consolidation, grouting, pointing, strengthening retrofitting and replacement etc.
- Deterioration and conservation of 20^{th} century heritage structures in concrete and other modern materials.

CST1b: CONSERVATION LABORATORY

- Procedure for sample collection and documentation.
- Identification of building materials: physical and chemical properties eg. moisture content, porosity, composition.
- Analysis of mortar: Mortar /Binder analysis such as lime mortar, mud mortar, adhesive material used in historic construction.
- Analysis of salts: Identification and analysis of salts causing damage.
- Analysis of renders.
- Comprehensive strength tests and structural analysis of mortars, stone, brick, masonry, timber etc.

Pedagogic methods and assessment: Lectures, Site visits, and Lab exercises on characterization and performance of historic building materials, collected from historic structures, drawing inferences to support appropriate conservation interventions. The course will be linked to the studio exercises.

CST1	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE	INTERNAL	EXTERNAL	TOTAL

					VISITS	MARKS	MARKS	
CST1a	2cr	2	16		32hr/sem	50	50	100
CST1b	1cr	1		16 Lab	4hr/sem	25	25	50

CM: CONSERVATION MANAGEMENT

CM1: MANAGEMENT OF HISTORIC BUILDING SYSTEMS

Objectives: This course aims to equip students to develop, technical expertise to manage historic buildings, structures and sites through sound strategies that ensure sustainable conservation. The course emphasizes on the need for precise and comprehensive documentation as a basis for conservation related decisions.

Course content:

- Definitions and concepts: maintenance and management.
- Historic building maintenance, management problems and remedial measures.
- Information Management: methods of documenting and recording of historic structures, areas, cities and regions. Compilation of inventories of cultural resources.
- Process of identification of heritage assets and methodology of listing.
- Computer application in Heritage Recording and Monitoring Information Systems (MIS).
- Photography, Arial Photography and Photogrammetry.
- Maintenance and management techniques: Case studies of maintenance programs, Consequential repairs, Special repairs, Annual repairs and Risk preparedness.
- Preparation of Maintenance programs for historic buildings; Planning, Policy formulation, and standards for maintenance.
- Specification of Conservation and Maintenance works: material specifications, performance specifications, measurement and valuation of conservation works.
- Management of Conservation projects: Parties and their responsibilities, types of contracts and agreements, tenders, evaluation and award, contract administration, cost control, work plan project monitoring and reporting, quality control and certification.
- Case studies of various conservation management projects undertaken in India and abroad.

Pedagogic methods and assessment: Lectures, tutorials, site visits and assignments linked to the studio exercise.

CM1	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2cr	2	16		16hr/sem	50	50	100

CS: CONSERVATION STUDIO

CS1: CONSERVATION STUDIO

The objective of the first semester studio is to introduce the students to the problems and issues confronting historic buildings and sites through an interdisciplinary approach, achieved by wherever possible, through a joint studio exercise with the students of various disciplines in the school.

The studio will develop methodologies for understanding, intervening and working in historic areas with focus on historic buildings, complexes and related spaces. The studio shall attempt to develop a systematic values based integrated approach for safeguarding these cultural resources.

The project includes identification of heritage areas/buildings, interpretation and presentation of their values. The multi-cultural significance associated with various sites/structures needs to be understood, communicated and interpreted through multiple perspectives and disciplines. The emphasis is on methods of data collection, analysis and inferences for conservation and design proposals.

CS1	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	12cr	12	---------	-------	Studio linked	300	300	600

SECOND SEMESTER

SE: SKILL ENHANCEMENT

SE2: GIS ADVANCED : Heritage applications

Objectives: Develop skills for application of GIS for mapping and classification of heritage resources and spatial interrelationships; assessment of hazards and risks in heritage areas; heritage resource monitoring and management; sustainable development of historic environments through interdisciplinary multi-variable analysis. Building upon the GIS Techniques I course, students are familiarized with analytical techniques and innovative on-line GIS heritage applications for better integration of heritage management and sustainable development concerns.

Course Content:

- Heritage applications of Geospatial Data – Review of GIS fundamentals: Data Classification, Spatial Aggregation, Vector Data & Raster Data Analysis for Buffering – deriving prohibited and regulated area boundaries mandated for ASI protected National monuments, Overlays, Distances, Pattern Analysis and Spatial Correlations;
- Geo-visualisation with integration of cartography and historic maps, image analysis and exploratory data analysis for visual exploration, analysis, synthesis and graphic presentation of geospatial data regarding heritage resources
- Terrain Mapping and Analysis: Data input, Contouring, Vertical profiling, hill relief shading, hypsometric tinting, perspective views, USGS Digital Elevation Models and 3-D draping. Slope analysis. (Spatial Analyst and 3-D Analyst)
- Viewshed and Watershed Analysis; Parameters, Applications and influencing factors for heritage resource management in historic urban and cultural landscapes.
- Geocoding & Dynamic Segmentation for Data management, data display, data query and data analysis; Basic elements of GIS modeling, Binary, Index, Regression and Process Models for specific heritage conservation applications
- Case Studies of the Arches Project: Open-source geospatial platform for heritage inventories; Use of GIS for heritage resource management in India (Delhi, Bengal, HRIDAYA, SMART Cities)& Abroad.

Pedagogic methods & assessment:

Computer Lab-work, Case Studies, Practical Exercises and assignments using GIS Heritage applications integrated with 3rd Semester Cultural Landscape Conservation Studio.

SE2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	Non credit	2hr		16	---	---	---	

CORE

CP: CONSERVATION PHILOSOPHY

CP2: EMERGING PARADIGMS: Community based approach

Objectives: The objective of the course is to discuss the emerging paradigms, ideas and theories in conservation of heritage which take the subject beyond the realm of 'conventional' professional practice to areas such as community led sustainable conservation. The course highlights the shift from a building centric to a people centric living heritage approach. It also questions the bipolar view of tangible and intangible heritage, and views them as mutually reinforcing and integral aspects in understanding of heritage.

Course content:

- Sociology and anthropology as fields of enquiry to include cultural role of built form and social constructs of space: Understand heritage as integral to society and culture.
- Assessment of local histories, values and implications on cultural studies; heritage as a continuum through time.
- Local and indigenous understanding of heritage to include the monumental and the vernacular built form, related crafts skills and craftspersons, practices, rituals, festivals etc.
- Stakeholders in heritage conservation: Identification of and role of stakeholders.
- Research methods on community studies: Community participatory resource assessment techniques; Cognitive mapping; Cultural mapping etc; Community perception and public participation in heritage conservation.
- Whose heritage?: Multiple meanings, Social access, territoriality, exclusion and inclusion of communities; Syncretism and contestations in heritage sites.
- Participatory processes and frameworks; advocacy planning for conservation; concepts of social, cultural, environmental and economic sustainability.

Pedagogic methods and assessment: The course will be a taught course linked with the studio exercise on Historic settlement conservation.

CP 2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1cr	1hr	16		---	25	25	50

CPP: CONSERVATION PRINCIPLES AND PRACTICES

CPP2a: CULTURAL LANDSCAPES

Objectives: The objective of the course is to acquaint the students with notions of cultural and natural ecology, and their synthesis into formation of legible cultural landscapes. The course will also equip the

students to address concerns for protection of the natural environment and techniques for sustainable development of cultural landscapes within multidisciplinary planning processes.

Course content:

- Ecophilosophies and varying concepts of human relationship with nature in different cultural contexts
- Methodology and parameters defining cultural landscapes and cultural regions
- Basic ecological understanding of biogeographical zones in India and their manifestations into cultural regions and cultural forms. (Mountain, Coastal, desert, riverine, highlands etc.)
- Definition of cultural landscapes as understood in the international framework (UNESCO, World Heritage sites, US Parks service etc.)
- Understanding cultural landscape theories through examples (cultural geography, sacred landscapes, reading landscapes as texts, symbolism and meaning, local knowledge systems).
- Tools of analysis of natural landscapes and their interface with cultural contexts. Methods of defining, delineating and mapping cultural landscapes.
- Interdisciplinary approaches to management of cultural regions and landscapes: International and national case studies.
- Strategies for sustainable development and conservation of cultural landscapes, integration into regional and district level developmental planning practices; Sustainable habitat programmes, Eco-sensitive zones.

Pedagogic methods and assessment: The course will be a taught course and linked with the studio exercise in third semester on Cultural landscapes.

CPP 2a	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16	---	---	25	25	50

CPP2b: ARCHAEOLOGY

Objectives: The objective of the course is to emphasize the relevance and centrality of archaeology to the field of conservation. The students develop an understanding of the art and science of archaeology, the management of archaeological sites, aspects of display and presentation of heritage at various scales and most importantly the integration of archaeological sites with living habitats.

Course content:

- Origins and development of archaeology as a discipline in the world and in India.
- Theory and principles of archaeology; links with social anthropology etc.
- Archaeological methods and techniques.
- Excavation, recording, preservation and interpretation of archaeological sites and materials.
- Salvage and rescue archaeology.

- Management of archaeological sites: legislation, institutions, operations, case studies.
- Community archaeology and participatory approach to conservation of archaeological sites.
- Display, presentation, interpretation and communication of objects in 'on site' and 'off site' museums.

Pedagogic methods and assessment: The taught course will be supported by field visits to archaeological sites to understand methods of excavation and conservation of archaeological sites. The course will also be supplemented with films on best practices of archaeology in international sites.

CPP 2b	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16		16hrs/sem	25	25	50

CST: CONSERVATION SCIENCE, TECHNIQUES AND TECHNOLOGY

CST2: BUILDING MATERIALS AND STRUCTURAL SYSTEMS

Objectives: The objective of the course is the application of the theoretical understanding of historic building materials and structural systems performance to variations in different regional contexts in India. It will focus on historic building technologies, structural behavior of buildings, deterioration processes and conservation interventions and will be an extension of the subject taught in the 1st semester.

Course content:

- Introduction to traditional and historic building materials and construction vocabularies in different cultural regions of India.
  The following will be studied in the context of the site taken up in the studio
- Identification of materials and structural building system typologies
- Inspection, condition assessment and diagnosis of material and structural defects.
- Spatial and functional assessment of historic buildings. Identification of resilient systems in regions prone to earthquakes and extreme nature events.
- Rescue and conservation measures for distressed buildings.
- Methods of retrofitting, strengthening and upgradation for continued or adaptive reuse.
- Case studies of successes and failures in similar contexts.
- Preparation of conservation specifications.
- Laboratory testing of materials for material and structural analysis to support sensitive interventions.

Pedagogic methods and assessment: As a tutorial course it will be linked with the studio exercise on Historic settlement conservation and supported by laboratory exercises to result in detailed conservation interventions in the built fabric.

CST 2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	4	12	Studio linked	25	25	50

CM: CONSERVATION MANAGEMENT

CM2a: INTEGRATED URBAN CONSERVATION

Objectives: The objective of the course is to prepare the students to read and understand a historic settlement as heritage, with a focus on the Indian context. The emphasis is on holistic comprehension, using the integrated systems approach, of the relationship of the physical, social, economic, infrastructural and administrative aspects influencing the formation and transformation of historic habitats. Students are prepared to address the complex realities and dynamic nature of Indian historic towns and cities.

Course content:

- Reading the morphology of a historic settlement and its associated region.
- Parameters/systems that shape historic settlements and their architectural form: the city assembled and the city shaped in the Indian context.
- The discourse on traditional and contemporary urbanism.
- Historic cities as repositories of knowledge: the Indian context.
- Historic urban landscapes approach: Urban conservation as an interdisciplinary and multidisciplinary process.
- History of integrated urban conservation approaches in the world with select examples: York, Chester, Bath, Bologna, Ferrara, Cairo.
- Approaches to integrated conservation in India with select examples explaining urban conservation tools and methods: Inner city regeneration, adaptive reuse, infill development etc.
- Institutional framework for urban conservation and renewal strategies in India.

Pedagogic methods and assessment: As a lecture course, it will be linked with the studio exercise on Historic settlement conservation, Planning for Conservation (1st semester) and Heritage Law and Jurisprudence (2nd semester).

CM2a	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16	---	---	25	25	50

CM2b: HERITAGE LAW AND JURISPRUDENCE

Objectives: The objective of the course is to understand the various aspects of law and jurisprudence needed to strengthen the discipline of heritage conservation.

Course content:

- The role of law and its importance for society.
- Principles and approaches to heritage legislation in the International context e.g. Malraux Act, Civic amenities Act, World Heritage Sites regulatory frameworks and case studies.
- Overview of evolving heritage management systems and linked legislation in India; ASI: Conservation Policy.
- Detailed assessment of the Indian legal framework in the context of protected and unprotected buildings and historic settlements: AMASRA, Model Heritage Act, Planning legislation, Municipal Acts, Environment Act, Rent Control Act, Slum Act, Land Acquisition Act etc.
- AMASRA Amendment 2010 and implications for urban conservation.
- Regulatory mechanisms and planning incentives for conservation.
- Public Interest Litigation for Heritage assets: Case studies.
- Legislation pertaining to adaptive reuse: International case studies.

Pedagogic methods and assessment: As a lecture course, it will be linked with the studio exercise on Historic settlement conservation.

CM2b	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16	---	---	25	25	50

CS: CONSERVATION STUDIO

CS2: STUDIO: Integrated Urban conservation

The objective of the Urban Conservation studio is to introduce the students to a historic settlement; to understand the historic layering of the city and its values and meaning for the community; the role of urban systems and their inter-relational dynamics which give historic cities a distinctive and legible form; the agents and patterns of transformation. It will familiarize the students with historic city terminologies, methods of survey and analysis. The studio equips the students to come up with models of integrated conservation, wherein conservation interfaces with sustainable development imperatives to provide a better quality of life and habitat in historic areas. It provides an opportunity to apply the theories, principles and techniques of conservation introduced in the first two semesters towards the conservation of the fabric at both the settlement and building level.

CS2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	12	12	---	---	Studio linked	300	300	600

ELECTIVES

Objectives: Core Subjects of other Planning & Design stream departments that are related areas of interest to the students of the Department of Architectural Conservation, would be available as Electives. Students would have the flexibility to select one Elective that is offered by other Departments of Studies at the School, as well as one of the range of Elective advanced courses offered by the Department of Architectural Conservation from time to time, in order to gain further expertise and expand their ability to work within multi-disciplinary teams.

Course Content:

- One Elective selected from those offered by other Departments of Studies – Environmental Impact Assessment etc.
- One Elective selected from those offered by the Department of Architectural Conservation – Possible courses identified include 'Conservation of Historic Gardens', 'Heritage Management Systems In India & Abroad', and other specialized topics.

Pedagogic methods and assessment: Lectures, site visits, assignment linked with Conservation studio.

ELECTIVE: EC-2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	16			50	50	100
ELECTIVE: EI- 2	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	16			50	50	100

THIRD SEMESTER

CORE

CP: CONSERVATION PHILOSOPHY

CP3: RESEARCH PAPER I

Objectives: The course objective is to enable students to formulate appropriate research methodologies and theoretical frameworks relevant to pressing conservation issues in the Indian context. The course provides students' the opportunity to reinforce their knowledge of rigorous research procedures, and strengthens their ability to undertake independent theoretical research on areas of enquiry, aspects and topics of relevance for their Conservation thesis in the subsequent IVth semester.

Course Content:

- Introductory lectures on advanced research methods, structuring of complex research enquiries and development of hypotheses, required for good theoretical grounding and academic writing of a high standard.
- Guidance on academic report writing for presentation and interpretation of research- Planning of research. Organizing and structuring research report, recommended systems for citations and referencing.
- Strategic evaluation of relevance of heritage research to wider societal, environmental and developmental issues.
- Identification of significant areas of research related to proposed conservation thesis.
- Scientific methods for heritage research in the inter-disciplinary and cross-disciplinary environments of heritage conservation and management.
- Linking primary and secondary data and establishing connections between theory, research and practice in both the Indian and International context.
- Development of methodology for the selected research project, and formulation of the theoretical framework.

Pedagogic methods and assessment: Introductory lectures, weekly tutorials, individual and group guidance for writing a 1500 word paper on initial exploration of identified research area to supplement selected 4th Semester Thesis topic. This research stage outcome could be published in the SPACE journal and other journals.

CP 3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	4	12		50	50	100

CPP: CONSERVATION PRINCIPLES AND PRACTICES

CPP3: HERITAGE TOURISM

Objectives: This course aims at developing the students' understanding of the theoretical aspects and practical implications of the field of cultural tourism on the conservation, management and sustainable development of heritage resources such as National monuments, World Heritage Sites, historic urban areas, heritage settlements, cultural landscapes and cultural regions.

Course content:

- Sustainable tourism: definitions and approaches.
- Importance of tourism in India: Potentials and problems.
- International Charters and National policies &programmes.
- Pilgrimage as an aspect of cultural tourism.
- Tourism management and infrastructure improvement for better heritage resource management.
- Potential of adaptive reuse and conservation planning: Tourism Impact Assessment and Evaluation of carrying capacity for significant heritage destinations such as hill stations, pilgrim towns, sacred landscapes, eco-sensitive areas.
- Role of host communities and stakeholder groups for participatory tourism management in historic areas: Case Studies.
- Formulation of visitor management plans.

Pedagogic methods and assessment: Lectures, site visits and assignment on visitor management plans, and heritage site interpretation; will be linked with the Conservation studio exercise. The students will be encouraged to assess various aspects of ongoing cultural tourism programmes and projects through practical exercises.

CPP3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16		Studio linked	25	25	50

CONSERVATION SCIENCE, TECHNIQUES & TECHNOLOGY

CST3: SUMMER TRAINING / INTERNSHIP

Objectives: Exposure to different phases and aspects of conservation practice in India, including client interaction, as well as fieldwork and coordinated on-site implementation of conservation works with skilled master-masons and craftspeople.

Course content:

- Practical training under the supervision of a qualified Conservation architect, organisation or Conservation professional, involving hands-on experience of various stages of an ongoing conservation project for a minimum period of 6 Weeks.
- Each student is to document all work responsibility, and prepare a Training Report that includes representative examples of work undertaken: preparatory documentation, condition assessment; development of practical, scientific conservation interventions.
- Students are encouraged to work on site, and familiarize themselves with specialized structural consolidation, stabilization and restoration techniques as part of the Training / Internship

Pedagogic methods and assessment: Site related 'hands-on' work experience as well as supervised office work. Certificate from qualified Conservation Architect / Professional/Organisation, and Training Form will be enclosed with the Training report. Training report and students' presentation will be evaluated by external specialists and practitioners.

CST3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	-	-	-	-	-	100	100

CONSERVATION MANAGEMENT

CM3: HERITAGE ECONOMICS

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.

Course content:

- 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.
- 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.
- 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.
- Assessment of economic viability of conservation projects: National & International case studies.
- Project on valuation of heritage resources – Case studies of innovative conservation financing mechanisms and programmes.

Pedagogic methods and assessment: Lectures, workshops, Case Studies, Field Study & Assignment related to 3rd semester Conservation studio.

CM3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	1	1	16		Studio linked	50	50	50

CS3: CONSERVATION STUDIO Cultural Landscape / Regional Scale Project

This Conservation Studio exercise will focus on the Cultural Landscape approach introduced in the previous semester for integration of heritage resource conservation and management into the planning framework at the regional, settlement, zonal and area scale. It will include Preparation of Heritage Resource inventories and Cultural Resource Management Systems for the selected Historic Urban Landscape, Cultural Landscape or Cultural region; Reading the selected Cultural Landscape, the links between landscape, natural and cultural factors that are legible, and defining its significance for sustainable development; Analysis and assessment of implications of existing development trends and identification of critical issues such as delineation of eco-sensitive zones, risk preparedness and climate change; Formulation of sustainable strategies for conservation and development of defined areas of the selected Cultural Landscapes, and integration with the regional planning framework; Preparation of a Conservation Management Plan; Demonstration Projects for integrated conservation and sustainable development at Zonal, Sub-Zonal, Local Area level within the defined Cultural landscape; Implementation and Management frameworks

Conservation Studio Exercise will have interdisciplinary inputs, guidance and periodic reviews. Site studies, exploration of crucial areas of heritage economics and heritage tourism though assignments of theory subjects will be linked with the Studio.

CS3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	12	12	--	-	Yes	300	300	600

ELECTIVES

Objectives: Core Subjects of other Planning & Design stream departments that are related areas of interest to the students of the Department of Architectural Conservation, would be available as Electives. Students would have the flexibility to select one Elective that is offered by other Departments of Studies at the School, as well as one of the range of Elective advanced courses offered by the Department of Architectural Conservation from time to time, in order to gain further expertise and expand their ability to work within multi-disciplinary teams.

Course Content:

- One Elective selected from those offered by other Departments of Studies – Environmental Impact Assessment etc.
- One Elective selected from those offered by the Department of Architectural Conservation – Possible courses identified include 'Risk Reduction & Risk Preparedness For Heritage Resources', 'Heritage Impact Assessment', 'Museology', 'Specialised Conservation Processes and Techniques', 'Adaptive Reuse', 'Up-gradation & Retrofitting Historic Buildings For Contemporary Use'; and other specialized topics.

Pedagogic methods and assessment: Lectures, site visits, assignment linked with Conservation studio.

ELECTIVE: EC-3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	16			50	50	100
ELECTIVE: EI- 3	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	16			50	50	100

FOURTH SEMESTER

CORE

CP: CONSERVATION PHILOSOPHY

CP4: RESEARCH PAPER II

This course is in continuation of the Research Paper I in the third semester and enables students to independently develop appropriate research methodologies in specific areas related to their thesis projects. It will focus upon providing theoretical inputs into the thesis topics and writing a well-structured technical research paper of 3000 words. The paper will be evaluated externally. The course will be conducted through Tutorials, guidance and periodic review of the progress of the research.

CP4	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2			24	-	50	50	100

CONSERVATION MANAGEMENT

CM4: MANAGEMENT SEMINAR

This course aims at strengthening the management aspect of the selected conservation thesis project. Each student identifies emerging areas of heritage management, central to their thesis project, based on the issues dealt with in the earlier semesters. These aspects could include Risk preparedness for heritage, Cultural resource information management systems, Economic feasibility assessment, Participatory heritage resource management, Conservation site management, Formulation of conservation & development guidelines & bye-laws for heritage areas, among others. Students will undertake a comparative analysis of the management framework in the context of the selected thesis with relevant international and national examples, and present their work in the form of a seminar at the end of the semester which will be evaluated externally. Lectures on selected topics will be given to supplement guided research.

CM4	CREDIT	HRS/WK	LECTURES	TUTORIALS	SITE VISITS	INTERNAL MARKS	EXTERNAL MARKS	TOTAL
	2	2	8	24		50	50	100

CONSERVATION STUDIO

CS4: THESIS STUDIO

The Thesis is the culmination of the academic learning in the conservation programme. Its principal objective is for the student to bring together an understanding of the discipline of conservation acquired over the previous three semesters. The students are encouraged to select any project of their choice

which offers an opportunity to synthesize the theoretical, technical and management aspects of conservation, through primary and secondary data collection, compilation, analysis and proposals. The thesis is an opportunity for students to make an original contribution that expands knowledge of conservation in India. The students are also expected to submit a report. The studio is supported by and linked to the research paper and management seminar being conducted simultaneously in the semester.

Credits	Hours/week	Lectures	Tutorials/Practicals	Site visits	Internal marks	External marks	TOTAL
12cr	12hrs	---	---	Thesis related	300	300	600