

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

### M. Arch. (Architectural Conservation)

#### 1<sup>st</sup> Year – I SEMESTER

S. No.	Course Type	Course Code	Course Name	Contact Hours per Week			Marks				Credits
				L	T	P	Exam Hrs.	IA	ETE	Total	
1	PCC	1MAC1-01	Philosophical Basis-I	3	0	0	3	30	70	100	2
2	PCC	1MAC1-02	Building Fabric & Materials I	3	0	0	3	30	70	100	2
3	PCC	1MAC1-03	Theory & History Parameters-I	3	1	0	3	30	70	100	2
4	PCC	1MAC1-06	Conservation Studio-I (Building Level)	0	0	6	0	120	80	200	7
5	MCC	1MCC3-21	Research Methodology	0	1	1	0	60	40	100	2
6	REW	1MAC4-50	Heritage Resource-I	0	1	3	0	60	40	100	3
7	SODECA	1MAC5-00	Social Outreach Dissertation & Extra Curriculum Activities							100	2
<b>GRAND TOTAL</b>								<b>330</b>	<b>370</b>	<b>800</b>	<b>20</b>

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

### M. Arch. (Architectural Conservation)

#### 1<sup>st</sup> Year - II SEMESTER

S. No.	Course Type	Course Code	Course Name	Contact Hours per Week			Marks				Credits
				L	T	P	Exam Hrs.	IA	ETE	Total	
1	PCC	2MAC1-01	Philosophical Basis-II	3	0	0	3	30	70	100	2
2	PCC	2MAC1-02	Building Fabric and Materials-II	3	0	0	3	30	70	100	2
3	PCC	2MAC1-03	Theory & History Parameters-II	3	1	0	3	30	70	100	2
4	PCC	2MAC1-06	Conservation Studio-II (Area Level)	0	0	6	0	180	120	300	8
5	MCC	2MCC3-XX	Audit Course-I	2	0	0					
6	REW	2MAC4-50	Heritage Resources-II	0	1	3	0	60	40	100	4
7	SODECA	2MAC5-00	Social Outreach Dissertation & Extra Curriculum Activities							100	2
		<b>GRAND TOTAL</b>						<b>330</b>	<b>370</b>	<b>800</b>	<b>20</b>

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

### M. Arch. (Architectural Conservation)

#### 2<sup>nd</sup> Year – III SEMESTER

S. No.	Course Type	Course Code	Course Name	Contact Hours per Week			Marks				Credits
				L	T	P	Exam Hrs.	IA	ETE	Total	
1	PCC	3MAC1-01	Philosophical Basis-III	3	0	0	3	30	70	100	2
2	PCC	3MAC1-02	Building Fabric & Materials	3	0	0	3	30	70	100	2
3	PCC	3MAC1-03	Theory & History Parameters-III	3	1	0	3	30	70	100	2
4	PCC	3MAC1-06	Conservation Studio-III (Complete in all respects)	0	0	6		120	80	200	6
5	MCC	3MCC3-XX	Open Elective	1	1	0		60	40	100	1
6	MCC	3MCC3-XX	Audit Course-II	2	0	0					
7	REW	3MAC4-60	Dissertation	0	0	4		120	80	200	3
		<b>GRAND TOTAL</b>						<b>390</b>	<b>410</b>	<b>800</b>	<b>16</b>

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

### M. Arch. (Architectural Conservation)

#### 2<sup>nd</sup> Year – IV Semester

S. No.	Course Type	Course Code	Course Name	Contact Hrs. per Week			Marks				Credits
				L	T	P	Exam Hrs.	IA	ETE	Total	
1	PCC	4MAC1-01	Conservation Management	3	0	0	3	30	70	100	2
2	PCC	4MAC1-02	Theory & History Parameters-IV	3	0	0	3	30	70	100	2
3	PCC	4MAC1-03	Project Planning for conservation and Project Case Studies	3	1	0	3	30	70	100	2
4	REW	4MAC4-70	Thesis	0	0	6		300	200	500	10
<b>GRAND TOTAL</b>								<b>390</b>	<b>410</b>	<b>800</b>	<b>16</b>

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)

### 1MAC1-01: PHILOSOPHICAL BASIS-I

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Research Approaches and Social Sciences**

#### Objective

The objective is to understand the scientific approach of cultural studies and cultural theories related to perception and interpretation of heritage.

#### Contents

- Introduction to various core disciplines including Social Sciences (Anthropology, Sociology, History, Art- History, etc.), Archaeology, Museology and Planning.
- Synergies between the core disciplines towards understanding heritage.
- Different Approaches and Methodologies to study Culture.
- 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.

#### Deliverables

- Students will explore various scientific approaches of cultural studies and cultural theories.
- The assignments shall deal with the core subject individually and later through case studies shall lead to holistic understanding of conservation.
- Assignment will be in the form of a report, site visit report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material

#### Suggested Readings

Readings	Authors
Archaeology in India: Individuals, Ideas and Institutions, 2009	Sengupta, Gautam, ed. and Gangopadhyay, Kaushik, ed.
Researches in Archaeology and Conservation, 1999	Mishra, P.K., ed.
The Past is a Foreign Country, Cambridge CUP	Lowenthal David
History of 20th-century Art, Flammarion, 2001	Blistene, Bernard
Heritage Studies: Methods and Approaches	Marie Louise Stig Sorensen, John Carman

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Traditional Knowledge System**

### Objective

The objective is to identify the difference between the formal education and the cultural knowledge system and to use this traditional and architectural knowledge system for conservation.

### Contents

- Difference between formal education and traditional knowledge.
- Traditional Knowledge: Prevailing knowledge within the society transferred through generations including those like prediction of rainfall, language, preserving and storage of food materials etc.
- Architectural Knowledge and its connection to Indigenous Architecture.
- Traditional Architecture and its associative crafts.
- Historic City, a product of people, place and time.
- Historicity and development.
- Architectural Knowledge System as a tool for Conservation.

### Deliverables

- Students shall apply the knowledge of traditional and architectural knowledge system for conservation.
- The assignments shall include the study of a historic city and explore the architectural knowledge system as a tool for conservation.
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
The Transformation of Nature in Art (Indira Gandhi National Centre for the Arts)	<a href="#">Coomaraswamy</a> , Ananda K., <a href="#">Vatsyayan</a> , Kapila.
Order of things: An Archaeology of the Human Sciences, 1994	Foucault, Michel
Craft techniques for Traditional Buildings, Batsford, 1991	Wright, A
Traditional Building: A global survey of structural forms and cultural functions	Noble, Allen G.
Vernacular Architecture and Regional Design: Cultural Process and Environmental Response, 2009	Heath, Kingston Wm

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)

### 1MAC1-02: BUILDING FABRIC & MATERIALS-I

**Credit: 2**  
**3L+0T+0P**

**Max. Marks: 100 (IA:30, ETE:70)**  
**End Term Exam: 3 Hours**

#### Objective

The objective is to understand the traditional materials, their behavior and changes due to various atmospheric elements.

#### Contents

- Lime, Lime mortar and stones
- Introduction to building materials: location, formation, physical and chemical properties and sourcing of building materials.
- Characterization of materials and compatibility of its usage.
- Relationship between various historic building materials and historic buildings.
- Maintenance requirements of building materials.
- Diagnosis and assessment of defects in building materials by atmospheric elements.
- Remedial measures.
- Strengthening of building materials.
- New building materials.

#### Deliverables

- Students will acquire knowledge of traditional materials, their behaviour and workability.
- The assignments shall include on site observation and application to develop measures of conservation.
- Assignment will be in the form of site visit report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material

#### Suggested Readings:

Readings	Authors
Architectural Tiles : Conservation and Restoration from the Medieval Period to Twentieth Century, 2005	Durbin, Lesley
Conservation of Building Stones, 2001	Kumar, V.A.
Low-tech, Light-tech and High-tech : Building in the Information Age, 2000	Daniels, Klaus
Lime and Lime mortars, Donhead Shaftesbury, 1998	Cowper, A. D.
Material and Skills for Historic building Conservation, Blackwell Publishing, 2008.	Forsyth, Michael
What are Lime Mortars	Gurmeet S. Rai, P. Desarkar
Why Use Lime	Sangeeta Bais

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **History of Conservation**

### Objective

The objective is to introduce personalities, ideologies and various philosophies that helped to formulate the principles of conservation discipline as it exists today in India and abroad. 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.

### Contents

- Difference between archaeology and conservation.
- History of conservation movement and emergence of conservation.
- Definitions and terminologies in conservation.
- Principles and approaches of conservation.
- UNESCO, World Heritage Centre and World Heritage Sites.
- Emerging concepts in heritage.
- Application of principles, approaches and concepts of conservation in practice.

### Deliverables

- Students shall be acquainted with the philosophies and principles of conservation.
- The assignments shall include studies of various charters and roles of various organisations in conservation.
- Assignment will be in the form report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material

### Suggested Readings

Readings	Authors
Protecting the cultural heritage : National Legislation and International Conventions, 1999	Biswas, S. S.
Care and administration of heritage monuments in India 1784 - 1904 -2012	Pant, Dharendra Kumar
Conservation: principles, dilemmas and uncomfortable truths, 2009	Bracker, A., Ed. and Richmond, A., ed.
Revealing India's Past (COSMO PUBLICATION)	Cumming Sir John
The Conservation Movement: a History of Architectural Preservation(ROUTLEDGE 2013)	Glendinning, Miles
Approaches to the Archaeological Heritage: A Comparative Study of World	Cleere Henry



# RAJASTHAN TECHNICAL UNIVERSITYN KOTA

## SYLLABUS

1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)

1MAC1-03: THEORY & HISTORY PARAMETERS-I

Credit: 2  
3L+1T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Architectural History**

### Objective

The objective is to explain the historic evolution of architecture/architectural idioms based on examples of buildings from different time periods and various contexts. The students will be exposed to the theory of parallel history, technological advancement of that era and establishment of the process of evolution of architectural idioms or no idioms.

### Contents

- Architecture a product of people, place and time leading to the theory of parallel history and technological advancements.
- Introduction to evolution of architectural idioms.
- Relationship between architectural idioms, time period and countries.
- Hybrid architecture and building of no idiom.
- Analysis of architectural idioms.
- Identifying additions and alterations to buildings.
- Solutions for additions, alterations and new construction to historic buildings.

### Deliverables

- Students shall be acquainted with the theory and principles of architectural idioms.
- The assignments would include study and interpretation of architectural idioms and dealing with addition and alterations to buildings.
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
New light on Hampi: Recent Research at Vijayanagara, 2006	Fritz, John M., ed. And Michell, George, ed.
Archaeology and Monumental Remains of Delhi, 2002	Stephen, C.
Fire and Memory : Architecture and Energy, 2000	Fernandez-Galiano, Luis
Sarkhej – Roza complex – CEPT University	Desai, Miki
Chambal Valley: a Heritage Treasure, 2010	Willis, Michael

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

**1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)**

**1MAC1-06: CONSERVATION STUDIO-I (BUILDING LEVEL)**

**Credit: 7  
0L+0T+6P**

**Max. Marks: 200 (IA:120, ETE:80)**

### **Objective**

The objective is to experience and find solutions to the problems and issues confronting historic buildings/site.

### **Contents**

- Understanding historic buildings/site.
- Demarcation of historic sites and its relationship to surroundings.
- 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.
- Memory

### **Deliverables**

- Students shall study and find solutions to problems and issues confronting historic building/site.
- The studio shall be progressive work in group. Deliverables shall include drawings and report. Progressive presentations shall be made for reviews at various stages.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)

1MACC3-21: RESEARCH METHODOLOGY

Credit: 2  
0L+1T+1P

Max. Marks: 100 (IA:60, ETE:40)

**Introduction :** Objective, scope and outcome of the course.

**Research Problem:** Meaning of research problem, Sources of research problem, Criteria Characteristics of a good research problem, Errors in selecting a research problem, Scope and objectives of research problem. Approaches of investigation of solutions for research problem, data collection, analysis, interpretation, Necessary instrumentations

**literature studies:** Effective literature studies approaches, analysis Plagiarism, Research ethics,

**Effective technical writing:** how to write report, Paper Developing a Research Proposal, Format of research proposal, a presentation and assessment by a review committee.

**Nature of Intellectual Property:** Patents, Designs, Trade and Copyright. Process of Patenting and Development: technological research, innovation, patenting, development. International Scenario: International cooperation on Intellectual Property. Procedure for grants of patents, Patenting under PCT.

**Patent Rights:** Scope of Patent Rights. Licensing and transfer of technology. Patent information and databases. Geographical Indications. New Developments in IPR: Administration of Patent System. New developments in IPR; IPR of Biological Systems, Computer Software etc. Traditional knowledge Case Studies.

### Suggested Readings:

1. Stuart Melville and Wayne Goddard, "Research methodology: an introduction for science & engineering students"
2. Wayne Goddard and Stuart Melville, "Research Methodology: An Introduction"
3. Ranjit Kumar, 2nd Edition, "Research Methodology: A Step by Step Guide for beginners"
4. Halbert, "Resisting Intellectual Property", Taylor & Francis Ltd, 2007.
5. Mayall, "Industrial Design", McGraw Hill, 1992.
6. Niebel, "Product Design", McGraw Hill, 1974.
7. Asimov, "Introduction to Design", Prentice Hall, 1962.
8. Robert P. Merges, Peter S. Menell, Mark A. Lemley, "Intellectual Property in New Techno-logical Age", 2016.
9. T. Ramappa, "Intellectual Property Rights Under WTO", S. Chand, 2008

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – I SEMESTER: M. Arch. (Architectural Conservation)

1MAC4-50: HERITAGE RESOURCE- I

Credit: 3  
0L+1T+3P

Max. Marks: 100 (IA:60, ETE:40)

### • Natural and Designed Landscape

#### Objective

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.

#### Contents

- Understanding Geography and natural habitats.
- Understanding of ecology, biodiversity and climate change.
- Changing attitude of mankind towards nature and its response in landscape designs.
- Role of site planning, flora and fauna, water systems etc. in landscape designs.
- Historic Landscape and Landscape Design.
- Indian definitions to open spaces and designed landscapes.
- Natural and designed landscapes as an important cultural resource, conservation and management of historic landscapes.

#### Deliverables

- Students shall develop skills to identify, maintain and manage natural and designed landscapes.
- The assignments shall include case studies and application of principles for conservation.
- Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.

#### Suggested Readings

Readings	Authors
Arguments for protected areas: Multiple benefits for conservation and use, 2010	Stolton, Sue, ed. And Dudley, Nigel, ed.
Community-based biodiversity conservation in the Himalayas, 2011	Gokhale, Yogesh, ed. And Negi, Ajeet K.
Earth-scan reader in poverty and biodiversity conservation , 2010	Rose, Dilys, ed. And Elliott, Joanna, ed.
Landscape-scale conservation planning, 2010	Trombulak, Stephen C., ed. And Baldwin, Robert F., ed.
Managing and designing landscapes for conservation: moving from perspectives to principles, 2007	Lindenmayer, D.B., ed. And Hobbs, R.J., ed.
Historic Gardens: making an Inventory for the Indian context, 2006.	Priyaleen Singh

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Documentation and Communication Techniques**

### Objective

The objective is to develop the necessary technical skills and competence required for the preparation of inventories of cultural resource for survey, analysis and recording. The module emphasizes the need for a methodical and systematic process for inventory as an essential basis for management and conservation plans. The section on Communication Techniques shall equip the students to competently communicate their thoughts and ideas in written, oral or visual form.

### Contents

- Understanding and need for documentation any
- Introduction to various methods of documentation.
- Standards of documentation.
- Difference between data and documentation.
- Appropriate documentation techniques of various scales and components of cultural resources.
- Application of documentation techniques.
- Communicating documentation including technical skills and competence.
- Photogrammetry and Cloud

### Deliverables

- Students shall acquire necessary skills towards documents and communication techniques.
- The assignments would include preparation of inventories, drawings and collection of data.
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
Measurement and Recording of Historic Buildings – Donhead, 1993	Swallow, Peter
Surveying Historic Buildings, Donhead, 1996	Watt, D & Swallow P
Guide to recording Historic Buildings, Butterworth, 1990.	ICOMOS
Architectural Heritage: Inventory and Documentation, Methods in Europe, Council of Europe, 1992	Proceedings, French Ministry for education and culture
Manual on Systems of Inventorying Immovable Cultural Property, UNESCO, 1984	<a href="#">Meredith H. Sykes</a>

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – II SEMESTER: M. Arch. (Architectural Conservation)

2MAC1-01: PHILOSOPHICAL BASIS-II

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- Inter-cultural Competences

### Objective

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.

### Contents

- Inter-cultural and cross-cultural communication.
- Importance of verbal and non-verbal communication.
- 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.

### Deliverables

- Students shall be equipped to interact and communicate with people of diverse cultural background.
- The assignments shall include application of skills in primary survey.
- Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.

### Suggested Readings

Readings	Authors
Art of Central Asia and the Indian subcontinent in Cross-Cultural Perspective, 2009	Pande, Anupa, ed.
Beginning theory: An Introduction to literary and cultural theory, 2011	Barry, Peter
Crossing cultural frontiers : Biblical themes in Mughal painting, 2011	Verma, S. P.
Encyclopedia of Vernacular Architecture of the World	Paul Oliver (Editor)
Lateral and Parallel Thinking	Bono, Edward de

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Cultural Landscapes**

### Objective

The objective is to build understanding for protection and management of cultural landscape.

### Contents

- Definition of Cultural Landscapes including ecology of the place.
- Methodology of defining and recognizing Cultural Landscapes/ Regions.
- Techniques for assessing the cultural values of a Cultural Landscapes/ Region.
- Demarcating Cultural Landscapes through various parameters like political, physical, natural, linguistic boundaries etc.
- Methods of mapping the Cultural Landscapes.
- Analysis of Cultural Landscapes.
- Management and Conservation of Cultural Landscapes /Regions.

### Deliverables

- Students shall acquire knowledge about cultural landscapes..
- The assignments would include application of concepts towards identification, demarcation and mapping of cultural landscapes.
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
Conservation of Cultural Landscapes, 2006	Agnoletti, Mauro, ed.
Archaeology of the Ganga Plain: Cultural-Historical Dimensions, 2010	Singh, Purushottam
Built to meet Needs: Cultural Issues in Vernacular Architecture, 2006	Oliver, Paul
Heritagescapes and Cultural Landscapes, 2011	Singh, Rana P.B., ed.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – II SEMESTER: M. Arch. (Architectural Conservation)

2MAC1-02: BUILDING FABRIC AND MATERIALS-II

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Structural Systems**

### Objectives

The objective is to induce a better understanding of the structure and fabric of historic structures, their failure and distress. The focus is on analysis of and interventions to the historic building structure.

### Contents

- Introduction to construction techniques and structural elements and components in a historic structure.
- Understanding various types of historic structural systems with reference to clay stone, timber & composite structures.
- Structural analysis of historic structures.
- Understanding various techniques for structural analysis.

### Deliverables

- Students shall acquire knowledge about historic structures.
- The assignments shall include observations of actual structure and interpretation of the structural systems.
- Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.

### Suggested Readings

Readings	Authors
Structural Aspects of Building Conservation	Beckmann, Poul
Structures: Why things don't fall down	Gordon, J. E
Structures and Construction in Historic Building Conservation	Forsyth, Michael
Developments in Structural form, Allen Lane , 1975	Mainstone, Rowland
Structural Appraisal of Historic Buildings	Robson, P
The Stone Skeleton	Heyman, J.



# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – II SEMESTER: M. Arch. (Architectural Conservation)

2MAC1-03: THEORY & HISTORY PARAMETERS-II

Credit: 2

Max. Marks: 100 (IA:30, ETE:70)

3L+1T+0P

End Term Exam: 3 Hours

- **Appraisal**

### Objective

The objective is to develop the ability towards appraisal as a tool to provide informed feedback on conservation project.

### Contents

- Understanding linkage between philosophy, history, theory and practice in architecture and conservation.
- Relationship between idea and interpretation.
- Difference between review, appreciation, criticism and appraisal.
- Relationship between criticism and practice.
- Techniques of appraisal.
- Appreciation and criticism as a tool to provide feedback.
- Writing appreciation and criticism.

### Deliverables

- Students shall acquire knowledge and difference about appreciation, criticism and appraisal.
- The assignments shall include short paper writing on appreciation and criticism of a heritage structure/ site.

### Suggested Readings

Readings	Authors
Locating Cultural Change: Theory, Method, Process, 2011	Chanda, Ipshita ed.
Urban culture: Critical concepts in literary and cultural studies, 2004	Jenks, Chris, ed.
Rethinking Architectural Historiography, Routledge, 2006	Dana Arnold, Elvan Altan Ergut, Belgin
Critical Architecture, Routledge, 2007	Rendell Jane, Hill Jonathan, Fraser Murray
Architecture, Criticism, Ideology, Princeton Architectural Press, 1985	Ockman, Joan

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Information and Data Management**

### Objective

The objective is to expose the students to various modes and techniques in organizing data including GIS and Microsoft Access.

### Contents

- Documentation as a data and resource.
- Various forms of data generated in conservation projects.
- Data compilation and storage.
- Various modes and techniques of organizing data.
- Linking data.
- Data analysis.
- Interpretation of data

### Deliverables

- Students shall learn various methods and techniques of organising data.
- The students shall compile data develop system of storage, link, analyse and interpret data .
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
Digital Heritage: Applying Digital Imaging to Cultural Heritage, 2006	MacDonald, Lindsay, ed.
Digital Applications for Cultural and Heritage Institutions (Ashgate)	James Hemsle, Vito Cappellini, Gerd Stanke
<u>Analyzing Complex Survey Data</u>	Eun Sul Lee and Ronald N. Forthofer
<u>Geographic Information Analysis</u>	David O'Sullivan and David J. Unwin
<u>Making Maps: a Visual Guide to Map Design for GIS</u>	John Krygier and Denis Wood

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

**1<sup>ST</sup> Year – II SEMESTER: M. Arch. (Architectural Conservation)**

**2MAC1-06: CONSERVATION STUDIO-II (AREA LEVEL)**

**Credit: 8  
0L+0T+6P**

**Max. Marks: 300 (IA:180, ETE:120)**

### **Objective**

The objective is to introduce the problems and issues confronting historic core and urban areas.

### **Contents**

- 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.

### **Deliverables**

- Students shall study and find solutions to problems and issues confronting historic core/urban areas.

The studio shall be progressive work in groups. Deliverables shall include drawings and report. Progressive presentations shall be made for reviews at various stages.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

1<sup>ST</sup> Year – II SEMESTER: M. Arch. (Architectural Conservation)

2MAC4-50: HERITAGE RESOURCES-II

Credit: 4  
0L+1T+3P

Max. Marks: 100 (IA:60, ETE:40)

- Conservation Practice in India and abroad

### Objective

The objective is to understand relationship between laws with their jurisdiction and it's relationship to conservation practice.

### Contents

- Protected and unprotected heritage in India.
- Laws and its jurisdiction
- 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; Town and Country planning Act, Maharashtra Region Town and Country Planning Act 1966 Gazette a '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 1971etc. Coastal Regulation Zone (CRZ) Regulation; Cantonment Act 2006 and Environment (Protection) Act, 1986 etc
- 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 in protection of heritage in India.
- Legal systems of protection of heritage across the globe.
- Various plans for conservation including, management plan, conservation plan, and it's statutory status.

### Deliverables

- Students shall learn about laws for protection of heritage in India.
- 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.

### Suggested Readings

Readings	Authors
The Law and the Conservation of Man-made Heritage in India,1989	E.F.N. Ribeiro
Ancient monuments and Archaeological Sites and Remains Act, 1958: with Rules Amendments, Notifications and Orders, 2007	Tripathi, Alok
Time, Process and Structured Transformation in Archaeology, 2010	McGlade, James, ed. and Leeuw, Sander Van Der, ed.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – III SEMESTER: M. Arch. (Architectural Conservation)

3MAC1-01: PHILOSOPHICAL BASIS-III

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Interventions**

### Objective

The objective is to explore various options of minimal intervention and choosing the appropriate option balancing the heritage needs and development needs.

### Contents

- Principles of minimal intervention.
- Scales and components of Intervention.
- Degree of Intervention.
- Exploring options of Intervention.
- Choosing the appropriate Intervention.
- Planning Intervention.
- Impact of the Intervention on the original.

### Deliverables

- Students shall explore various options of intervention in the heritage context.
- Assignments to include case studies and site work for exploring option, selecting the right option and planning interventions.
- Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.

### Suggested Readings

Readings	Authors
Heritage Conservation: Preservation and Restoration of Monuments -- 1996	Batra, N.L.
Conservation of wooden objects -- 2009	Bisht, A. S.
Conservation of building stones -- 2001	Kumar, V.A.
Structural conservation of monuments in South India -- 1997	Murthy, K.L.
Taj Mahal and its conservation -- 2009	Dayalan, D.
Damp Buildings: Old and New. (ICCROM)	Massari, G.; Masari,

# RAJASTHAN TECHNICAL UNIVERSITYN KOTA

## SYLLABUS

- **Research Methodologies**

### Objective

The objective is to carry out independent theoretical research which may form the theoretical framework of the thesis.

### Contents

- Skills towards technical writings.
- Research Design and Methodologies includes social research methods..
- Writing Hypothesis.
- Forms of data collection and data presentation.
- Writing Research Analysis and Conclusion.
- Writing Bibliography/References/Sources of information.

### Deliverables

- Students shall be equipped with theoretical research
- Assignments includes a research paper of 5000 words on theoretical framework required for thesis.

### Suggested Readings

Readings	Authors
Architectural Research Methods, John Wiley and sons, 2002	Linda Groat, David Wang
Writing a Qualitative Research. 3 <sup>rd</sup> ed. , 2009.	H.F. Wolcott
A Manual For Writers For Research Paper, Thesis And Dissertation, Chicago, 2007	Turabian, Kate L.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – III SEMESTER: M. Arch. (Architectural Conservation)

3MAC1-02: BUILDING FABRIC & MATERIALS

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Strengthening and Retrofitting**

**Objective:**

The objective is to understand the behavior, repair and strengthening solutions of structural systems of historic structures and also upgrading them to cater to the contemporary demands and needs.

**Contents**

- With reference to clay, stone, timber and composite structures.
- Introduction to repair and strengthening in historic structures and introduction of modern construction techniques and materials.
- Understanding various methods of strengthening of historic structures.
- Understanding the failure and distress in historic structures.

**Deliverables**

- Students will acquire skills to find appropriate remedial measures and solutions for strengthening and retrofitting of structure.
- Assignments will include on site observation and analysis and formulating proposal for remedial measures and solutions for strengthening and retrofitting of a structure.
- Assignment will be in the form of reports, reviews and tutorials with suitable illustrations.

**Suggested Readings**

Readings	Authors
Lighting Retrofit and Relighting: a Guide to green lighting solutions, 2011	Benya, James R.
Repair of Ancient Buildings, Society for Protection of Ancient Buildings, 1981	Powys, A. R.
Structural Conservation of Monuments in South India, 1997	Murthy, K.L.
Sustainable Home Rrefurbishment : the Earthscan expert guide to retrofitting homes for efficiency, 2010	Thorpe, David
Structural Aspects of Building Conservation, McGraw Hill, 1995	Beckmann, Poul

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – III SEMESTER: M. Arch. (Architectural Conservation)

3MAC1-03: THEORY & HISTORY PARAMETERS-III

Credit: 2  
3L+1T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Disaster Management of Cultural Resources**

### Objective

The objective is to train and develop skills for Disaster Management of Cultural resources.

### Contents

- Introduction to Disaster Management.
- National Disaster Management System of India.
- Analyze the vulnerability of cultural heritage for physical, socio economic and political risks.
- Risks to Cultural Resources during Natural Disasters.
- Techniques and Strategies for mitigating risks to cultural heritage.
- Protecting Cultural Heritage in times of conflict and other emergencies.
- Planning for post-disaster recovery of cultural heritage.

### Deliverables

- Assignment will be in the form of a report, site visit report, class reviews and tutorials covering topics mentioned above with suitable illustrations and supportive material.

### Suggested Readings

Readings	Authors
Industrial Buildings: Conservation and Regeneration, Taylor and Francis, 2009	Stratton, Michael
Architecture Reborn: Converting Old buildings for New Uses, Rizzoli, 1999	Powell, Kenneth
Disaster management	Harsh K. Gupta

- **Regeneration**

### Objective

The objective is to build skills towards analyzing and developing cultural infrastructure through principles of traditional knowledge systems.



# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

### Contents

- Identification of Cultural Properties.
- Cultural vibrancy of the place: People, Quality of life
- Regeneration and its needs.
- Regeneration process and its critical consideration like physical and cultural infrastructure.
- Heritage a tool for Urban Regeneration.
- Digress needs but Heritage Conservation an integral part of Urban Regeneration.
- Viability of Heritage Conservation as a tool for Urban Regeneration.

### Deliverables

- Students shall be equipped with skills to develop cultural infrastructure.
- Assignments shall include identification of cultural properties and explore heritage conservation as a tool of Urban Regeneration.
- Assignment will be in the form of reports, reviews and tutorials with suitable case studies.

### Suggested Readings

Readings	Authors
Partnership, Collaborative Planning and Urban Regeneration	McCarthy, John
The Economics of Uniqueness: Investing in Historic City Cores and Cultural Heritage assets for sustainable Development	Guido Licciardi, Rana Amirtahmasebi
Conservation in the Age of Consensus, Routledge, 2009	John R. Pendlebury
Chronocity: The Assessment of Built Heritage for Developable and Creative Change, Alinea, Editrice 2010	Dimitra Babalis
The New Economy of the Inner City: Restructuring, Regeneration and dislocation in the twenty first century Metropolis, 2008	Thomas A Hutton

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – III SEMESTER: M. Arch. (Architectural Conservation)

3MAC1-06: CONSERVATION STUDIO-III (COMPLETE IN ALL RESPECTS)

Credit: 6  
0L+0T+6P

Max. Marks: 200 (IA:120, ETE:80)

### Objective

The objective is to introduce the students to the identification of heritage, problems and issues confronting heritage at a regional scale.

### Contents

- Understanding heritage at a regional scale like- cultural landscapes, etc.
- Identification of heritage with a knowledge system approach.
- Demarcation of the heritage area 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 a sustainable future.
- Preparation of a heritage management strategy.

### Deliverables

- Students shall study and find solutions to problems and issues confronting heritage at a regional scale.

The studio shall be progressive work in groups. Deliverables shall include drawings and report. Progressive presentations shall be made for reviews at various stages.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – III SEMESTER: M. Arch. (Architectural Conservation)

3MAC4-60: DISSERTATION

**Credit: 3**  
**0L+0T+4P**

**Max. Marks: 200 (IA:120, ETE:80)**

### **Objective**

Research study

### **Contents**

Each student is required to conduct a non-design study on a topic selected by the student and approved by the department. The study shall be conducted under the guidance of teacher or external expert in the department. This Dissertation should lead to a design solution to be taken up as a Thesis Topic.

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – IV SEMESTER: M. Arch. (Architectural Conservation)

4MAC1-01: CONSERVATION MANAGEMENT

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **World Heritage Sites**

### Objective

The objective is to develop skills in management of World Heritage Sites.

### Contents

- Operational Guidelines.
- Statement of Significance.
- Process of Nomination.
- Nomination Dossiers.
- Requirements of Management of World Heritage Sites.
- Facilitation requirements.
- Impact of nomination of World Heritage Site on socio economic condition of the surroundings.

### Deliverables

- Students will acquire knowledge about nomination process of World Heritage Site.
- Assignment shall include preparation of tentative list document for a given site.

### Suggested Readings

Readings
Convention concerning the protection of the World Cultural and Natural Heritage: adopted by the General Conference at its 17 <sup>th</sup> session, Paris. UNESCO 1972
Operational Guidelines for the implementation of World Heritage Convention, World Heritage Centre. UNESCO, 2003

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Carrying Capacity**

### Objective

The objective is to understand the process of calculating carrying capacity of Heritage site.

### Contents

- 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.

### Deliverables

- Students shall acquire skills to calculate carrying capacity.
- Assignment shall include exercise to calculate the carrying capacity for a heritage site.

### Suggested Readings

Readings	Authors
Tourism Carrying Capacity Assessment	Ashgate. 2004 Mexa
Managing tourism at World Heritage Sites	UNESCO
Tourism and Archaeological Heritage Management at Petra, ICAHM, 2012	Douglas C.

- **Visitor Management**

### Objective

The objective is to create awareness towards different types of visitors and their needs in finding management solution.

# RAJASTHAN TECHNICAL UNIVERSITYN KOTA

## SYLLABUS

### Contents

- 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.

### Deliverables

- Students shall acquire knowledge about visitors and finding management solutions.
- Assignment shall include working out infrastructural requirements for visitors.

### Suggested Readings

Readings	Authors
Cultural Heritage and Tourism: An Introduction	Timothy, Dallen J.
Heritage Visitor Attractions: An Operations Management Perspective, Thomson, 1999	Leask, Anna, Yeoman, Ian

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – IV SEMESTER: M. Arch. (Architectural Conservation)

4MAC1-02: THEORY & HISTORY PARAMETERS-IV

Credit: 2  
3L+0T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

- **Heritage Impact Assessment**

### Objective

The objective is to develop skills towards Heritage Impact assessment to assess the impact of development on heritage in various conditions.

### Contents

- Understanding principles of impact assessment.
- Heritage impact assessment.
- Methodology for Impact assessment.
- Understanding impact of development on the heritage value.
- Base line conditions for impact assessment.
- Significance of impact with and without mitigation.
- Residual effects.

### Deliverables

- Students shall acquire skills towards Heritage Impact Assessment.
- Assignment shall include a case study and preparation of Heritage Impact Assessment.
- Assignment will be in the form of reports, drawings and presentations. The students shall make progressive presentations for reviews at various stages.

### Suggested Readings

Readings	Authors
Risk Preparedness: A Management Manual for World Cultural Heritage ICCROM, 2007	Stovel, H
ICOMOS guidelines for cultural world heritage properties, Jan 2011.	ICOMOS
A Cultural heritage assessment of the impact on the outstanding universal value of the Greenwich maritime world heritage site, 2010	ICOMOS
Management Guidelines for World Cultural Heritage Sites ICCROM, 2005	Feilden, B.M.; Jokilehto, Jukka

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

- **Estimation and Evaluation**

### Objective

The objective is to learn the process of project formulation. The process shall consist of extracting information from documentation and preparing detailed project reports. Completed projects shall be evaluated towards quantification and quality.

### Contents

- Extracting information from documentation and preparation of estimates.
- Writing specifications for various items.
- Rate analysis for special items.
- Sequencing of items.
- Evaluate a completed project for its efficacy of interventions.
- Evaluate a project for its adaptive reuse.
- Understanding the impact of proposed interventions on conservation projects.

### Deliverables

- Students shall acquire skills in preparation of estimates and evaluation.
- Assignments shall include preparation of estimates and taking up a project for evaluation.

### Suggested Readings

Readings	Authors
Conservation Manual: A handbook for the use of Archaeological Officers and others entrusted with the care of ancient monuments, 1923	John Marshall
Analysis of Rates for Delhi - CPWD	CPWD
A Guide to the Project Management Body of Knowledge: PMBOK(R) Guide	Project Management Institute
Building Performance: Function, Preservation, and Rehabilitation	ASTM Special Technical Publication
A Management Guide to PERT/CPM	Jerome D. Wiest, Ferdinand K. Levy



# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – IV SEMESTER: M. Arch. (Architectural Conservation)

### 4MAC1-03: PROJECT PLANNING FOR CONSERVATION AND PROJECT CASE STUDIES

Credit: 2  
3L+1T+0P

Max. Marks: 100 (IA:30, ETE:70)  
End Term Exam: 3 Hours

#### Objective

The objective is to develop a project in the field of conservation, right from conception to evaluation

#### Contents

- Definition of Project and Project Management
- Introduction to Project Appraisal
- Project Planning and Project Scheduling
- Project Monitoring
- Types of Project Evaluation
- Bids and Tenders
- Contracts and Arbitration

#### Deliverables

- Students shall acquire skill to develop and appraise project.
- Assignment to include preparation of project.

#### Suggested Readings

Readings	Authors
CPWD Contract Document	CPWD
Construction Contracts, Law and Management	Will Hughes, Ronan Champion, John Murdoch
Projects	Prasanna Chandra
Contracts and their Management	Ramaswamy BS

# RAJASTHAN TECHNICAL UNIVERSITY KOTA

## SYLLABUS

2<sup>ND</sup> Year – IV SEMESTER: M. Arch. (Architectural Conservation)

4MAC4-70: THESIS

Credit: 10  
0L+0T+6P

Max. Marks: 500 (IA:300, ETE:200)

### Objective

The objective is to develop and acquire more specialized knowledge in the field of conservation through conservation projects or scientific research.

### Contents

- 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 evaluation would be done by a panel of external and/or internal jurors during reviews held at intervals during the course of the semester
- Submission and defense of the thesis through drawings, reports, study sheets, models and digital presentations and verbal communications in all the reviews and the final viva-voce