

SEMESTER-IX														
1	ARPC5111	Architectural Research Methods	3	0	0	3	30	0	50	0	20	100	Professional Core (PC)	3
2	AREP5111	Project Management	3	0	0	3	30	0	50	0	20	100	Essential Program Requirements (EPR)	3
3	ARPE5111	Professional Elective-III	3	0	0	3	30	0	50	0	20	100	Professional Elective (PE)	3
4	ARPC5121	Architectural Thesis-I (Dissertation)	0	8	4	10	0	100	0	100	200	400	Professional Core (PC)	12
5	AREP5121	Seminar	0	2	0	1	0	40	0	40	20	100	Essential Program Requirements (EPR)	2
Total			9	10	4	20						800		23



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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Architectural Research Methods
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	ARPC5111
6.	Status (Core/Essential/Elective)	Professional Core (PC)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To develop research acumen among the students. 2. To deliver the required knowledge regarding research methods in Architecture. 3. To familiarize the students with Architectural research and writing research papers.	
10.	Course Syllabus: Unit-1: Introduction to Research a. Meaning, objective, types, approaches, and significance of research. b. Research methods and research methodology. c. Research process. d. Criteria of a good research and problems faced. Unit-2: Architectural Research Methodology—An Introduction. a. Domain of Architectural Research; Understanding the nature of research in architecture- Need & significance; Ethics. b. Concepts of theory; Identifying Theoretical Framework; Ontological and Epistemology of Knowledge. c. Defining Research Problems, Framing Research Question; Research design – need, components, considerations, and Research Process including Design of Sampling, Scaling Techniques and Methods of data collection. Unit-3: Strategies of Architectural Research a. Historical Research; Qualitative Research; Correlational research; Experimental and Quasi-experimental research; Simulation Research; Logical Argumentation research and Case Studies and Combined Strategies Unit-4: Techniques of Analyses a. Processing and Analyzing of data; Statistics in research; measure of Central Tendency; Measure of Dispersion; Asymmetry; Relationship. b. Graphical representation of analysis. Qualitative/other Data Analysis: Data validation, Reliability, and calibration. Unit-5: Report Writing a. Purpose, characteristics, guidelines, steps, format, structure, contents, presentation. b. Referencing style- Various Styles of referencing i.e., APA, MLA etc. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Egenter, N. (1992). <i>Architectural Anthropology: Research Series, Anthropologie Architecturale: Serie de Recherches, Architektur-Anthropologie: Forschungs-Reihe</i> . Structura Mundi. ii. Groat, L. N., & Wang, D. (2013). <i>Architectural research methods</i> . John Wiley & Sons. iii. Knowles, C., & Sweetman, P. (Eds.). (2004). <i>Picturing the social landscape: Visual methods and the sociological imagination</i> . Routledge. iv. Kothari, C. R. (2004). <i>Research methodology: Methods and techniques</i> . New Age International.	



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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Project Management
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	AREP5111
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To make students able to understand the project process in construction. 2. To make students able to manage large scale projects.	
10.	Course Syllabus: Unit-1: Introduction to Project Management a. Terminologies, Objectives, Goals and Different Aspects of Management. b. Concepts (Traditional Management and Modern Management). c. Project Programming, Resource Balancing, Phasing of Activities, etc. d. Project Control, Reviewing, Updating and Monitoring. Unit-2: Construction Management a. Role of Architect in Construction Management. b. Different Schedules in Construction Management. c. Handling Large Construction Projects and Planning of Construction Sites. d. Feasibility Study. Unit-3: Contracts a. Contractual Relationships and Types of Contracts. b. Conditions of Contracts. c. Project Assessment and Project Cost Jobs Size. d. Divisions of Responsibilities, Liasoning with Owners, and their parties. Unit-4: Project Scheduling and Monitoring-I a. Introduction to Operation Management. b. Time Estimates. c. Project Scheduling through Gantt's Chart, Bar Chart, Network Analysis, etc. d. Critical Path Method (CPM) and Optimization. Unit-5: Project Scheduling and Monitoring-II a. Project Evaluation and Review Technique (PERT). b. Three Time Estimates. c. Probability of Completion of Projects. d. Project Reports, Progress Reports, Construction Financing Facilities, etc. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Chitkara, K. K. (2011). Construction Project Management-Planning, Scheduling and Controlling, Tata McGraw Hills. ii. Loosemore, M. (2003). Essentials of construction project management. UNSW Press. iii. Shrivastava, U. K. (2000). Construction Planning and Management.	



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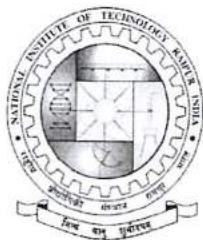
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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Environmental Planning
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	ARPE5111-1
6.	Status (Core/Essential/Elective)	Professional Elective (PE)-III
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand the principles of environmental planning and management. 2. To inculcate decision-making capabilities with environmental sensitivity.	
10.	Course Syllabus: Unit-1: Introduction to Environmental Planning a. Elements of environmental planning. b. Area of environmental planning assessment. c. Spheres of environmental planning i.e., bio-physical environment, socio-economic environment, and built-environment, etc. Unit-2: Environmental Policies and Legislation a. The Environmental Protection Act. b. Acts and guidelines such as- The Wildlife (Protection) Act, The Air Act, The Water Act 1974, The Forest Conservation Act, etc. c. Notification on coastal regulation zone. Unit-3: Evaluating Environmental Quality Evaluation of factors, control measures, sample collection, testing procedures, national and international case studies of: a. Air Pollution. b. Water Pollution. c. Land Pollution. d. Noise Pollution, etc. Unit-4: Environmental Impact Assessment Tools a. Advanced techniques and tools for predicting environmental constraints. b. Importance and methods of Environmental Impact Assessment. c. Introduction to Social Impact Assessment and Economic Impact Assessment. Unit-5: Case Studies a. Various international summits. b. Worlds summits to safeguard the environment like Climate Change Commission, Kyoto Protocol, etc. c. National and international examples and awareness programs. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Canter, L. W. (1977). <i>Environmental impact assessment</i> . New York: McGraw-Hill. ii. Daniels, T. L. (2019). <i>The environmental planning handbook for sustainable communities and regions</i> . London: Routledge. iii. McKinney, M.L & Schoch, R.M. 1996. <i>Environmental Science System & Solutions</i> , Web enhanced edition.	



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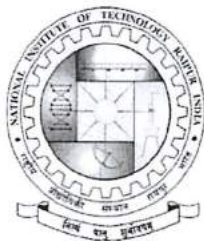
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**B.Arch. Syllabus
Semester - IX**

1.	Department proposing the course	Architecture
2.	Course Title	Architectural Conservation
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	ARPE5111-2
6.	Status (Core/Essential/Elective)	Professional Elective (PE)-III
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To introduce the technical aspects for the methodological study of historic building systems. 2. To impart the knowledge of conservation techniques and documentation.	
10.	Course Syllabus: Unit-1: Introduction to Conservation a. Basic Definitions: Architectural Conservation, Preservation, Restoration, Adaptation, etc. b. Need, Objectives and Scope. c. Role of Government Authorities (ASI, State Archeological Departments, etc.). d. Role of Non-Govt. Organizations (ICOMOS, INTACH, Aga Khan Trust, etc.). Unit-2: Conservation Principles a. Conservation Approach, Practice, and its Applications. b. Policies and Legislation. c. Charters: Burra Charter, Venice Charter, Athens Charter, etc. d. Heritage Guidelines. Unit-3: Conservation Science: Techniques and Technology a. Causes of Defects. b. Deterioration in Historic Buildings. c. Conservation Interventions. d. Remedial Measures: Cleaning, Maintenance, etc. Unit-4: Heritage Infrastructure a. Concepts of Historic Towns, Quarters and Areas. b. Concepts of Heritage Zone/Precincts. c. Concept of Integrated Conservation. d. Values and Ethics in Architectural Conservation. Unit-5: Conservation Practices a. Re-use and Redevelopment of Historic Buildings and Areas (Heritage/Tourism). b. Rating and Listing for Heritage structures. c. Case Studies. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Feilden, B. M., & Jokilehto, J. (1998). Management Guidelines for world cultural heritage sites. Rome: ICCROM. ii. Forsyth, M. (2007). Structures & construction in historic building conservation. Oxford: Blackwell. iii. Licciardi, G., & Amirtahmasebi, R. (2012). The economics of uniqueness: Investing in historic city cores and cultural heritage assets for sustainable development. Washington, DC: The World Bank.	



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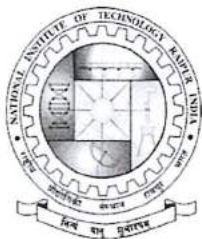
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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Landscape Architecture
3.	L-T-P Structure	3-0-0
4.	Credits/# of period	3/3
5.	Course number (Code)	ARPE5111-3
6.	Status (Core/Essential/Elective)	Professional Elective (PE)-III
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To understand the role of Landscape in Architecture. 2. To learn the historical development, planning process of Landscape Design.	
10.	Course Syllabus: Unit-1: Introduction to the elements of Landscape a. Scope and Importance in Architecture. b. Elements of Landscape: Natural & Manmade, Earth form, Water, Vegetation, etc. Unit-2: Plant Materials and Land a. Understanding the Natural Environment. b. Plant Materials: Types, Characteristics, etc. c. Properties and use of Plant Materials. d. Earthworks and Surveying. Unit-3: Water and Landscape Structures a. Water as Element of Landscape. b. Properties and use of water in Landscape. c. Landscape Structures like Trellis, gazebos fencing, pergola, arbors, etc. Unit-4: History of Landscape Architecture a. Principles and design philosophy. b. Exposure to Historical Landscape (India, China, Japan, English, French, etc.). Unit-5: Landscape Design a. Concepts and Site Development. b. Landscape Design Methods and Detailing. c. Basic Landscape Construction like culverts, walls, etc. d. Irrigation Design and Installation, Drainage, Lighting, etc. <i>The assignments may be in form of sketches, term-papers, reports, drawings, presentations, etc.</i>	
11.	References: - i. Bring, M. "Japanese Gardens: Design & Meaning", McGraw Hill Book Co., New York, 1981 ii. Christensen, A. J. (2005). Dictionary of Landscape Architecture and Construction. McGraw-Hill. iii. Dee, C. (2001). Form and fabric in landscape architecture: a visual introduction. Taylor & Francis. iv. Jellicoe, G., & Jellicoe, S. (1987). The landscape of man: shaping the environment from prehistory to the present day (p. 8). London: Thames and Hudson. v. Kassler, E. B. (1964). Modern gardens and the landscape. vi. Littlewood, M. (2012). Landscape Detailing Volume 4 (Vol. 4). Routledge. vii. Motloch, J. L. (2000). Introduction to landscape design. John Wiley & Sons. viii. Reid, G. (2012). Landscape graphics: plan, section, and perspective drawing of landscape spaces. Watson-Guipill.	



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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Architectural Thesis-I (Dissertation)
3.	L-T-P Structure	0-8-4
4.	Credits/# of period	10/12
5.	Course number (Code)	ARPC5121
6.	Status (Core/Essential/Elective)	Professional Core (PC)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To study and understand how to do an Architectural Research/Design. 2. To develop the skill for visual and verbal presentation of work.	
10.	Course Syllabus: The course is the first part of architectural thesis which exhibits the ultimate crux of architectural knowledge gained by a student in the entire course of B. Arch. This part focuses on the preliminary studies and methodology that are imperative for a good thesis on architecture. This course will give opportunity to students to harness their research abilities on identifiable domain and demonstrate the research as application for a design project in the same identifiable manner. The thesis project shall be done and assessed as per the 'Thesis Manual' prepared by the Department time to time. The work shall be done on any topic, known theories, established practices, etc. related to the field of architecture. It is advisable that the selected topic may have relevance with the proposed topic of thesis to be done in Part II of the course. This course, will, in general, but not exhaustively, contain formulation of Theme and Topic, Secondary study on Theme and Topic, Collection and Analysis of secondary data, formation of Design Brief and Identification of sources for primary data collection, Preparation of Questionnaire for primary Data Collection, Preliminary selection of Site and Analysis of Site for Architectural Thesis II. <i>The deliverables shall be in form of Presentation, Report, Portfolio, Sketches, Models, etc.</i>	
11.	References: - i. Bloomberg, L. D., & Volpe, M. (2018). <i>Completing your qualitative dissertation: A road map from beginning to end</i> . ii. Boote, D. N., & Beile, P. (2005). <i>Scholars before researchers: On the centrality of the dissertation literature review in research preparation</i> . <i>Educational researcher</i> , 34(6), 3-15. iii. Herr, K., & Anderson, G. L. (2014). <i>The action research dissertation: A guide for students and faculty</i> . Sage publications. iv. Lester, J. D., & Lester, J. D. (2012). <i>Writing research papers: A complete guide</i> (p. 416). Pearson. v. Rudestam, K. E., & Newton, R. R. (2014). <i>Surviving your dissertation: A comprehensive guide to content and process</i> .	



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B.Arch. Syllabus
Semester - IX

1.	Department proposing the course	Architecture
2.	Course Title	Seminar
3.	L-T-P Structure	0-2-0
4.	Credits/# of period	1/2
5.	Course number (Code)	AREP5121
6.	Status (Core/Essential/Elective)	Essential Program Requirements (EPR)
7.	Pre-requisites (course no./title)	NIL
8.	Frequency of offer	Annual
9.	Course Objectives (CO): 1. To undertake research individually in each subject relating to architecture and present research process through seminars and reports. 2. To equip the students to develop analytical, presentation and writing skills.	
10.	Course Syllabus: Seminars are intended to develop the capacity of students to undertake a research in a given subject relating to architecture and allied domain. It is divided in two parts: Seminar I (Review a Paper or a Book): The students will select a paper from a reputed journal or a book on a topic related to Architecture for review. This will help students to understand, analyze, reproduce, and review the technical papers or a book in the form of review report. This review writing is aimed at understanding the method of writing, organization and presentation of arguments attempted by the author of the paper or book. Seminar II (Systematic Study): The students will identify any study area and conduct a systematic study. This may include Appreciation, Critical Appraisal of Architectural projects or Architect's philosophy or any other topic. This would include analytical study of the subject through literature study, data collection, interpretations, observations, analysis, discussion, etc. <i>The deliverables shall be in form of oral presentation, visual presentations, reports, etc.</i>	
11.	References: - i. Andrew Knight Editor and Les Ruddock, "Advanced Research Methods in the Built Environment", Wiley-Blackwell, 2008 ii. Cozby, Paul C. (2001), "Methods in Behavioral Research", Seventh Edition. Mountain View: Mayfield Publishing. Web Resources: http://methods.fullerton.edu/ iii. D. G. Evans, Paul Gruba and Justin Zobel, "How to write a better thesis", Carlton, Vic. : Melbourne University Press, 2011 iv. Groat L. and D. Wang, "Architectural Research Methods", New York: Wiley, 2002 v. Leach N., "Rethinking Architecture", London Routledge 2004 vi. Linda L. Nussbaumer, "Evidence-based design for interior designers", New York : Fairchild ; Oxford : Berg distributor, 2009 vii. Nesbitt K., "Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995", New York: Princeton Architectural Press, 1996 viii. Peter Hamilton, "Visual research methods", London: Sage, 2006 ix. Richard F. Fellows and Anita M. M. Liu, "Research Methods for Construction", 4th Edition Oxford: Wiley-Blackwell, 2004 x. Tacke M. de Jong and D. J. M. van der Voordt, "Ways to study and research urban, architectural, and technical design", Delft. The Netherlands: DUP Science, 2002 xi. Whyte, William Foote, "Learning from the Field", Thousand Oaks, CA: Sage, 198	