

**B. ARCH. SEMESTER – IX**  
**NAR – 901, ARCHITECTURAL THESIS**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESSMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	0	23	-	-	400	-	-	250	650	24	-

**OBJECTIVES**

- To prepare a student to independently handle and present all aspects of an architectural design, from its evolution to final solution in totality.
- To understand the importance of the evolutionary stages of a design process and various techniques required for a successful presentation of an architectural design.
- To develop in students the ability to handle specific aspects / thrust area of design relevant to the topic.

**INTRODUCTION**

- The multiple challenges of 'built environment' offer unlimited scope for the choice of an architectural design thesis. The selection of the thesis subject may result either from issue/s involved, or from the challenges of design, or the inherent and acquired aptitude of a student, which he/she wishes to perfect and present. The variety of the intentions give students the choice to select the topic of the thesis from a purely hypothetical to a 'live' programme, as long as the topic can result in tangible 'built environment' solution. Consequently, the size of the project has no relevance in the selection of the topic; the riding clause being the topic's relevance to serve the laid down specific objectives inherent in the philosophy of the institution.
- For reasons of maintenance of uniformity in results and standards, the thesis presentation shall be in two distinct compartments: a report comprising of all the preliminary studies required for the thesis topic, and the final design solution.
- The Thesis report shall consist of all relevant contextual studies: of user, place and time to enable the formulation of design criteria.
- The design solution shall be in the form of drawings and models of the concept and design and shall further include the presentation of at least one specific aspect relevant to the selected topic in complete detail.
- The report, in duplicate, shall be submitted in bound form together with prints/photographs of all the drawings and model/s.
- All relevant/ pertinent drawings, sketches, models from previous stages to be put up for the jury to show evolution of design.

<b>Module-1</b>	<b>Stage I</b> <b>Marks = 100</b>	Thesis Plan; Project/client brief; Inventory and Site Study; Site Analysis; Selection Criteria of Case studies and Literature studies - Their Critical Analysis and Inferences; Development of the Design Criteria for the selected thesis project.
<b>Module-2</b>	<b>Stage II</b> <b>Marks = 100</b>	Revised Design Criteria; Concept and Sketch Design through drawings and models.
<b>Module-3</b>	<b>Pre- Final</b> <b>Marks = 100</b>	Design development in form of Site Plan(s), floor Plan(s), Sections and Elevations, Views and Working Models fully explaining the design, Structural Systems, Services Compliance.
<b>Module-4</b>	<b>Final (Internal)</b> <b>Marks = 100</b>	Selection of Elective; Criteria, Objectives, Methods, Scope and Limitations. Finalized Detailed Drawings complete with electives and models with Final Thesis report

**COMPOSITION OF JURY PANEL FOR EVALUATION OF THESIS**

**INTERNAL EXAMINERS -**

- An Architect/Director / Principal / Head of the Department of the parent institution.
- The Thesis Guide.

**EXTERNAL EXAMINERS -**

- An Architect/Director / Principal / Head of the Department / Professor of other than the parent institution.
- An eminent architect from the profession with at least 15 years of field experience.

Further the Thesis Coordinator will act as facilitator.

**B. ARCH. SEMESTER – IX**  
**NAR – 902, PROFESSIONAL PRACTICE–II**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
2	1	0	15	35	<b>50</b>	50	0	<b>50</b>	<b>100</b>	3	3 HRS.

**OBJECTIVES**

- To acquaint the students with most of the general aspects of valuation and arbitration.
- To familiarize the students with organization of an architect's office.
- To familiarize the student about an elementary knowledge of various instruments of law and legislation to safeguard the professional interest.

<b>Module-1</b>	<b>Valuation</b>	Valuation of immovable properties, elements of valuation and factors affecting valuation; Techniques of valuation of landed and building property; Value classification and types of valuation.
<b>Module-2</b>	<b>Arbitration</b>	Arbitration, Arbitrator, Umpire, Nature of arbitration. Appointment, Conduct, Powers, and duties of arbitrators and umpires; Procedure of arbitration and preparation of awards.
<b>Module-3</b>	<b>Law related to Land</b>	The land acquisition Act, UP Urban Development Act 1973
<b>Module-4</b>	<b>Law of Control</b>	The Partnership Act, 1932
<b>Module-5</b>	<b>Law related to Conservation</b>	The elements of the Ancient monument,(site remains) Act 1956
<b>Module-6</b>	<b>Office Organization &amp; Management</b>	Professional organization, setting of practice, salaried appointments, public sector, private sector jobs, procedure of operation in government organization.

**APPROACH**

- The spectrum of lectures will be covered through lectures citing practical examples. Specialist should supplement the courses through extension lectures.

**REFERENCE BOOKS**

1. Dr. Roshan H. Namavati, Professional practice
2. Council of Architecture, handbook of professional document.
3. The Indian Institute of architects, The handbook of Professional Practice.
4. Madhav Devshaktu, Professional Practice
5. Governance of Societies under Multistoried buildings/housing

**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE–II (A – CONSTRUCTION MANAGEMENT)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- To provide an insight into Management of Building/Construction projects involving management of money, manpower and machinery.
- To enhance the professional ability of an Architect about the methodology of executing a Project.
- To expose the students to the currently prevalent techniques in the planning, programming and management of a project.

<b>Module 1</b>	<b>Introduction</b>	Aim, objectives and functions of construction management. Role of Architect & Construction/Project Manager in Construction Management. Resources of construction Industry. Various stages of construction.
<b>Module 2</b>	<b>Organization</b>	Organization, types of organization study of organizational structures suitable for building and construction projects, the roles of the various members of a typical construction organization, responsibility & authority, functions in the management process, qualities of an ideal construction organization and ethics in construction industry.
<b>Module 3</b>	<b>Construction Management Techniques</b>	Construction Planning scheduling and controlling phases. Levels of details & time scale Resource scheduling, Smoothing & levelling, Project execution, Monitoring & progress reporting. Use of Management techniques – Bar charts and limitations of bar charts. Mile Stone Chart.
<b>Module 4</b>	<b>PERT and CPM</b>	Use of Management techniques –PERT and CPM; event, activity, dummy, network rules, graphical guidelines for network, numbering of events. CPM network analysis & PERT time estimates, time computation & network analysis.
<b>Module 5</b>	<b>Mechanization</b>	Cost time analysis in network planning using CPM. Advanced and automated technology in construction Introduction to construction equipment, performance, characteristics of equipment. The role of equipment /machinery in construction industry, factors affecting selection of construction machinery, standard versus special equipment, and understanding of the various issues involved in owning, operating and maintaining of construction equipment, economic life of equipment.
<b>Module 6</b>	<b>Resource Allocation &amp; Quality Control</b>	Resource usage profile - Histogram, Resource smoothing and Resource levelling. Planning of temporary services at the site, Safety precautions at construction sites, Security of materials at building site, Stages of inspection and quality control. Computer applications in construction management. Introduction to IT in construction industry-software packages.

**REFERENCES:**

1. Construction Planning, Equipment and Methods by RL Peurifoy
2. Project Management for Architects by S P Mukopadhyay
3. Part and CPM by L S Srinath
4. Project management through network technologies M. Thyagarajah
5. Construction Project Management Planning, Scheduling & Controlling -K. Chitkara – Tata McGrawhill

6. Dr. B.C.Punmia et al. *Project planning and control with PERT and CPM*, Laxmi Publications, New Delhi
7. Jerome D.Wiest and Ferdinand K.Levy, *A Management Guide to PERT, CPM*, prentice Hall of India Pub,Ltd., New Delhi, 1982
8. R.A. Burgess and G.White, *Building production and project Management*, The construction press, London,1979
9. Sharma JC, *Construction Management and Accounts*, Satya Prakashan, New Delhi

**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE–II (B – HOUSING)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- To create awareness about the causes and consequences of housing problems and to impart knowledge about the possible solutions.
- Understanding of the various issues involved in urban and rural housing and knowledge about the planning and design solutions for low income groups

<b>Module 1</b>	<b>Introduction &amp; Terminology</b>	Housing Need and Demand in India -Present and Future. House, Housing and Settlement. Detached and Attached House Types. Net & Gross Residential Density, Perceived Density, Zoning.
<b>Module 2</b>	<b>Issues Affecting Housing</b>	Issues Affecting Housing- Climate Change, Social factors, Affordability, Health, Safety & Security, Noise Control, Utilities and Services.
<b>Module 3</b>	<b>Objectives of Housing Agencies</b>	Objectives and role of government, urban local bodies and other agencies in housing development: Census, NSSO, HUDCO, State Housing Board, NBO, National Housing Bank (NHB).
<b>Module 4</b>	<b>Housing Schemes</b>	Understanding of various housing schemes- Jawaharlal Nehru National Urban Renewal Mission (JNNURM), Rajiv Awas Yojana (RAY), Basic Services for the Urban Poor (BSUP), Integrated Housing & Slum Development Programme (IHSDP), and Site & Services Scheme.
<b>Module 5</b>	<b>Housing Development &amp; Design</b>	Understanding of various Housing categories through case studies e.g., Condominiums, Co-operative Housing, Rental Housing, Affordable Housing, Rural Housing, – Their Advantages and Disadvantages. Understanding of Neighbourhood. Exercises of moderate magnitude on Neighbourhood Planning.

**REFERENCE BOOKS:**

1. Babur Mumtaz and Patweikly, Urban Housing Strategies, Pitman Publishing, London, 1976.
2. Geoffrey K. Payne, Low Income Housing in the Development World, John Wiley and Sons, Chichester, 1984.
3. John F.C. Turner, Housing by people, Marison Boyars, London, 1976.
4. Martin Evans, Housing, Climate and Ocmfort, Architectural Press, London, 1980.
5. Forbes Davidson and Geoff Payne, Urban Projects Manual, Liverpool University Press, Liverpool, 1983.  
Patrik Schumacher : 2004, Digital Hadid.
6. Miglani O.P., Urban Housing in Developing Economy.
7. Jain A.K., Urban Housing and Slums.

**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE–II (C – URBAN DESIGN)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- The overall goal of the course is to help students formulate an understanding of the urban forms and spaces. Cityhistory and theory will be examined.
- The contemporary needs of the society and the role of spaces will be dealt along with the need for design control.

<b>Module-1</b>	<b>Introduction</b>	Emergence of urban design as a discipline, definitions and its ambiguities.
<b>Module-2</b>	<b>Urban Space Study</b>	Historical and contemporary example of urban space. Piazza del campo, St. Peters, Campidoglio, St. Marco. Yerba Buena garden, san Francisco, pike place market, Seattle Washington
<b>Module-3</b>	<b>Urban design Parameters</b>	Space and place, morphology, urban form and structure, fabric, texture, grain, enclosure, human scale, complexity, etc.
<b>Module-4</b>	<b>Basic Principles and Theories of Urban Design</b>	Theories related to visual or perception aspect (Gorden Cullen) Theories related to physical aspect (Kevin Lynch) Theories related to social aspect (Jane Jacob) (after understanding above aspect student will explain above theory on Indian space and context)
<b>Module-5</b>	<b>Urban Design Details</b>	Urban outdoor lighting, urban green infrastructure, acoustic consideration for urban fabric, air quality at street level.

**REFERENCE BOOKS**

1. Whyte, William H. *The Social Life of Small Urban Spaces*. Washington D.C.: Conservation Foundation, 1980.
2. Alexander, C. (1987) *A New Theory of Urban Design*
3. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961), 55.
4. Jacobs, A. B. (1993). *Great streets*. Cambridge, MA: MIT Press.
5. Appleyard, D. (1981). *Livable streets*. Berkeley: University of California Press.
6. Lynch K, 1960 *The Image of the City* (Cambridge, Mass: MIT Press)
7. Lynch k, Good city form(Cambridge, Mass:MIT Press)
8. Goden Cullen,*the concise townscape*.
9. Rob krier, *urban space*
10. Bernard tshumi, *Manhattan transcript*
11. Deependra Prasad,*New architecture and urbanism*,
12. John Lang,Architecture and Independence
13. Bill Hiller, *Social logic of space*
14. Paul D. Speriregon Architecture of town and cities, The MIT press
15. jan gehl , Life between buildings: using public space
16. ian geh,l Cities for people
17. Christopher Alexander, Public spaces public lifePattern language
18. *The City of Tomorrow and its Planning* by F. Etchells, London, Architectural Press, 1929,
19. Lewis mumford – city in history
20. Rapoport, amos history and precedent in environmental design
21. Rapoport, amos the meaning of built environment.
22. Watson D. et al (ed), Time saver standards of urban design, McGraw Hill,2003

**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE–II (D – SUSTAINABLE AND INTELLIGENT BUILDING)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- To provide knowledge on the underlying concepts of intelligent buildings; to provide the working principles of and hands-on experience on building automation systems, office automation systems, and communication systems; and to provide basic knowledge of the construction and installation of the structured cabling system enabling integrated system connections.

<b>Module-1</b>	<b>Introduction to sustainability &amp; Intelligent buildings</b>	Social, economic, environmental factors, ecological footprint, local and worldwide sustainable benchmarks, building ecosystem, building life-cycle Concept. Concept of intelligent buildings, energy efficiency, vertical transportation systems, communication systems, security systems, building automation and lighting systems.
<b>Module-2</b>	<b>Sustainable design</b>	Principles and strategies, site design, energy management, renewable energy, sustainable material selection, water management, indoor air quality, alternative energy, environmental systems, environmental assessment methods.
<b>Module-3</b>	<b>Building Management Systems (BMS)</b>	Methods to control, monitor and optimize building services, eg., lighting, heating, security, CCTV and alarm systems, access control, audio-visual and entertainment systems, ventilation, filtration and climate control, etc., even time & attendance control and reporting (notably staff movement and availability).
<b>Module-4</b>	<b>Energy management in services</b>	Energy in building design - Energy efficient and environment friendly building - Thermal phenomena - thermal comfort - Indoor Air quality - passive heating and cooling systems.

**APPROACH**

- The students are expected to study the selected topic In depth, Including the basic principles, and their application In built projects by undertaking case studies, necessary site visits, and collecting all the relevant Information to make It an exhaustive study and present It in a well documented format having A-3/ A-4 size papers

**REFERENCE BOOKS**

- Moore F., Environmental Control System McGraw Hill, Inc., 1994.
- Brown, G Z, Sun, Wind and Light: Architectural design strategies, John Wiley, 1985.
- Cook, J, Award - Winning passive Solar Design, McGraw Hill, 1984
- Intelligent Buildings: An Introduction by Derek Clements-Croome
- Intelligent Buildings: Design, Management and Operation BY Professor Derek ClementsCroome

**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE–II (E – CONSERVATION)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVE:**

- To understand what is heritage and its importance in terms of Architecture, structure, materiality and its significance in the evolution of the mankind in understanding nature and adapt and make its dwelling units respecting the nature and local climatic conditions.
- The overall goal is to conserve our rich heritage specially built heritage to showcase the richness of our Architecture, culture & society during various period of time and regime and promote conservation of our heritage for our future generations to see and learn evolution in building architecture and technologies during various time periods.
- Our main objective will be to document the heritage of our city and make guidelines, policies, conservation plans for built heritage structures, Heritage precincts and region with respect to its economic viability and spread awareness in the locals and institutions through workshops which will help in sustainable development of the societies.

<b>Module-1</b>	<b>Introduction to Architectural Conservation</b>	Definition of heritage, what is an historic building? Introduction to architectural conservation of buildings of importance – definition, nature, purpose and scope. Values in conservation; Ethics of conservation building conservation legislation etc.
<b>Module-2</b>	<b>Defects in Heritage</b>	Causes of defects and decay of a heritage structure. Natural agents of deterioration and loss.
<b>Module-3</b>	<b>Preparatory Procedures for Conservation.</b>	Preparatory procedures for conservation. Initial inspection, Continuing Documentation, Analysis of the documentation. Role or need of documentation for the conservation & restoration of the any Heritage built form, Heritage precincts or any sort of tangible and Intangible heritage. <ul style="list-style-type: none"> <li>- Listing of the Region or Precincts for generating a data base of the heritage properties.</li> <li>- Development of regional level maps for various types of heritages. (Heritage site maps, Heritage land-use maps).</li> <li>- Buildings and Precincts typology study according to its usage, Architectural style, religion (study of demography and its comparison past and present) study.</li> <li>- Building material, Construction techniques of Heritage structures in various typologies of buildings with respect to time.</li> </ul>
<b>Module-4</b>	<b>Introduction to International Charters</b>	Introduction to various charters their significance and their role in guiding our conservation policies and guidelines or regional level and structural level (special reference to Barra and Venice charter).
<b>Module-5</b>	<b>Literature Study and Site Visit</b>	Literature case study of Red Fort (available on ASI web site) and site visit of ASI protected heritage buildings (in local city/town) and along with condition assessment techniques and methods.

**REFERENCE BOOKS:**

1. An introduction to conservation by Feildon B. M.
2. Conservation of Building by I. H. Harvey.
3. A critical bibliography of Building Conservation by Smith I. H.



**B. ARCH. SEMESTER – IX**  
**NAR – 903, ELECTIVE - II(F – ENERGY SIMULATION)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

Students should be able to –

- Apply energy and mass conservation principles in the analysis of energy performance of buildings;
- Conduct design day and annual analysis of energy use in residential and commercial buildings;
- Develop detailed building energy simulations using state-of-the-art building energy simulation software packages;
- Propose and evaluate strategies for improving the energy performance of buildings. architects whose works have been influenced by the vernacular architecture of the region.

<b>Module-1</b>	<b>Introduction</b>	Overview: Energy consumption of buildings in India; Need of energy efficient building in India
<b>Module-2</b>	<b>Energy Simulation softwares</b>	Software programs for energy simulation modeling (Ecotect, EnergyPlus, OpenStudio & SketchUp, eQuest, Trnsys, IES/VE, DOE, TRACE).
<b>Module-3</b>	<b>Energy Codes and Standards</b>	ECBC Code, LEED, IGBC, GRIHA, BEE. ASHRAE 90.1 – compliance paths
<b>Module-4</b>	<b>Internal loads in buildings</b>	Plug loads, lighting, people, equipment. Schedules. Data resources for building sector energy use. Energy Use Intensity (EUI)
<b>Module-5</b>	<b>eQuest- Energy programming and modelling</b>	eQuest’s interface, basics of Schematic Design Wizard – building footprint, shape, zoning, envelope construction, exterior doors and windows, performing simulations, and basic output. Design Development Wizard. Defining multiple shells. Importing/using CAD floorplans. Detailed edit mode.

**REFERENCE BOOKS**

- Energy Simulation in Building Design, by J. Clarke Computerized Building Energy Simulation Handbook, by Waltz and Waltz
- Green Building Guidelines: Meeting the Demand for Low-Energy, Resource Efficient
- Contrasting capabilities of building energy performance simulation programs. Research Paper by Drury B. Crawley

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(A – ARCHITECTURAL PEDAGOGY)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- Seeking Responsive Forms of Pedagogy in Architectural Education.
- To develop students' critical thinking abilities about the role of community involvement in different phases of the design process.
- To enhance students' understanding of the core concepts, methods, and techniques that pertain to community design as they relate to different phases of the design process (programming, design, post occupancy evaluation), and as they relate to different types of environments.
- To understand the techniques of teaching a specialized course like architecture.
- The course would attempt encouraging students to evolve individual, creative yet pragmatic thought process.

<b>Module-1</b>	<b>Introduction To Architectural Pedagogy</b>	Understanding Pedagogy, Importance of Pedagogy, Role of Pedagogy in Architecture. Nature of Interaction between teacher and students, Level of participation / involvement of both Educators and Students in various subjects / experiences. The routines of students and educators. The rules that govern the relationship between students and teachers.
<b>Module-2</b>	<b>Instructional Methods and Techniques</b>	Instructional Methods - Lecture method, Demonstration method, Case Study method, Project method, Programmed Instruction/ Learning, Studio method. Instructional Media - Meaning, Need and importance, Projected media, Non-projected media, Computer Based multimedia.
<b>Module-4</b>	<b>Field Studies in Architecture</b>	Learning of various aspects of architecture through site visits. Understanding the methods of learning, observing and experiencing these aspects. Preparation of report of the particular case study.
<b>Module-5</b>	<b>Hands – on - Studios as a Tool for Learning</b>	Development of exercises for various subjects in Architectural Studios. Learning about programme making for the various studios and workshops.

**REFERENCE BOOKS**

1. Transformative Pedagogy in Architecture and Urbanism by Ashraf M. Salama.
2. Art, Architecture, Pedagogy Experiments in Learning by Ken Ehrlich.

**REFERENCE WEBSITES**

1. <http://aap.cornell.edu/news-events/how-we-teach-architecture-pedagogy-featured-puerto-rico-symposium>.
2. [www.architectural-review.com/...pedagogies...architectural...](http://www.architectural-review.com/...pedagogies...architectural...)
3. <http://www.edtechpost.ca/readings/davidorr-architecture-as-pedagogy.pdf>
4. [www.field-journal.org/uploads/file/.../Field%205\(1\)%20Salama.pdf](http://www.field-journal.org/uploads/file/.../Field%205(1)%20Salama.pdf)

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(B – MANAGEMENT & MARKETING SKILLS)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESSMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES:**

- To impart the students latest and relevant knowledge from the field of management theory and practice.
- To provide opportunities to the students for developing necessary managerial skills.

<b>Module-1</b>	<b>Basic Concepts of Management</b>	Definition, Need and Scope, Introduction to Management Science, Theory & Practice, Environment of Management, Managers & Entrepreneurs, Managerial Roles & Skills, Manager's Social & Ethical Responsibilities.
<b>Module-2</b>	<b>Functions of Management</b>	Planning – Concept, Nature, Importance, Steps, Limitations, Management by objectives Organizing - Concept, Nature, Importance, Principles, Centralization, Decentralization, Organization Structures, Line and Staff Authority, Functional, Leadership & Management, Product, Matrix, Geographical, Customer, New Forms of Organization – Virtual, Organizations as Networks - Types of Network. Organizations/Clusters – SelfOrganizing Systems. Organizational Designs Staffing - Concept, Nature, Importance, Steps. Concept of knowledge worker. Directing – Concept, Nature, Importance. Controlling - Concept, Nature, Importance, Process of controlling, Control Techniques.
<b>Module-3</b>	<b>Financial Management</b>	Cost of project, Means of finance, Estimates of sales and production, Cost of production, Working capital requirement and its funding, Profitability projections, Break Even Point(BEP), Projected cash flow statement, Projected balance sheet, Project profitability at market prices, Techniques of financial appraisal, Financial risk and over-all financial viability of the project through Internal Rate of Return (IRR)
<b>Module-4</b>	<b>Marketing Management and Skills</b>	Introduction to Marketing concept - Evolution of marketing & customer orientation, Marketing Environment and Evaluation of Market opportunities, Market research & Marketing Information Systems, Demand forecasting, Market potential analysis, Product Life cycle, New Product development process.
<b>Module-5</b>	<b>Marketing Environment and Planning</b>	Promotion decisions, Integrated Marketing communications concept, Communication tools, Contents of Marketing Plan, Developing Marketing Plan for variety of goods and services, Promotion decisions, Integrated Marketing communications concept, Communication tools, Personal selling & Sales management

**REFERENCE BOOKS**

1. Essentials of Management – Koontz – TMGH
2. Essentials of Management- Thomson Southwestern, Andrew J. Dubrin
3. Principles & Practices of Management - Saxena
4. Modern management: concepts and skills- Samuel C. Certo and Tervis Certo,
5. Principles and Practices of Management - Shejwalkar and Ghanekar
6. Management Concepts & Practices – Hannagan
7. Managerial Economics – D. Salvatore, McGraw Hill, New Delhi.
8. Managerial Economics – Pearson and Lewis, Prentice Hall, New Delhi
9. Principles of Marketing - Philip Kotler and Gary Armstrong
10. Fundamentals of Marketing - Stanton
11. Marketing Management – Rajan Saxena

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(C – FUTURISTIC ARCHITECTURE)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES:**

- To have an overview of the innovative concepts for future in terms of design, infrastructure and latest technology.
- To understand the limitations in terms of energy and area to build and sustain.

**Module-1 Theoretical and Imaginative Ideas**

Overview of the theoretical texts and drawings of the ideas by architects over the ages, who have imagined beyond today. E.g. Scholari, Archigram (Peter Cook), Raimund Abraham, Boullée, Ledoux Antonio Sant’Elia etc.

**Module-2 Alternate Sustainable Ideas through Design and Technology**

Enumerating the varied innovative energy alternatives and their harnessing through design ideas, materials, techniques and functions.  
 Prefabrication as a basic module for building.

**Module-3 Social and Practical implications of a new world**

Comprehending the new social order, modes of transport, physical dimensions of an alternate world.

**Module-4 Futuristic Geometry**

Understanding a higher geometry (minimal surfaces) and its eventual spatial order.  
 Fractals, Fuzzy Logic in architecture.

**APPROACH:**

- Presentations would be made by the teacher. The students are expected to do library studies and seminars on varied topics to supplement the information base and make it more interactive.

**REFERENCE BOOKS:**

1. Fantasy Architecture: 1500-2036 [Neil Bingham, Clare Carolin, Rob Wilson, Peter Cook]
2. Visions of the Future: Architecture for the 21st Century, Loft Publications.
3. Futuristic : Visions of Future Living, Caroline Klien (Editor), Stefanie Lieb (Text by)
4. Future Architectue by Eduard Broto

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(D – ARCHITECTURAL JOURNALISM)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- To make students aware about Architectural Journalism
- To encourage them for Architectural writing, Documentation and Page Composition
- To familiarize students in preparation of Book Reviews and Articles.

<b>Module-1</b>	<b>Introduction To Architectural Journalism</b>	<p>What is Journalism and why it is important?            Relation between Architecture and Journalism.            Looking at the ways design and the built environment are covered in the media today            Reading a broad range of contemporary and historical writings by journalists and critics and discuss how these stories reveal different approaches, attitudes, and biases in covering design.</p>
<b>Module-2</b>	<b>Introduction To Architectural Writing</b>	<p>Writing on different kinds of articles - from news stories to critical essays on particular buildings and social issues.            Sometimes students will report on buildings under construction and other times they will reflect on and criticize projects that are completed.            Learning how to gather information and do research for stories and then write various kinds of articles about built environment in Architecture, which will help them to understand the built environment and express their ideas on it.</p>
<b>Module-3</b>	<b>The state of Architectural Criticism</b>	<p>Introduction to Criticism and Importance of Criticism.            Relationship between Architecture and Criticism.            Reading the various articles from the magazines, newspapers and websites about the built environment to understand the criticism and social commentary. Failures of Architectural Criticism.            Analysis of various critical themes, and their comparison and learn how to criticize a built environment in various aspects and writing about criticism.</p>
<b>Module-4</b>	<b>Structure of Architectural Journals &amp; Journalism</b>	<p>Learning of documenting the collected information.            Formatting, page composition, editing write-ups, content writing.  <b>Photo</b>            Learning the techniques of clicking photographs through specific angles of built environment and their editing and modification.            Learning the technique of how the photographs are supporting the write-ups about built environment, to help them understand the expression of pictorial, verbal and visual relationship of architecture journalism.</p>
<b>Module-5</b>	<b>The Built Environment &amp; How We Live Today?</b>	<p>Looking at and explaining a building in today's scenario.            What's happening now and what should be the future.            Read article and write an essay on recent projects.            Writing about the new technologies in today's architecture and new construction techniques.</p>

**APPROACH**

- Each week, students will have a reading and a writing assignment. Usually, readings will come from a newspaper, magazine, or website and students will have to respond with their own piece of writing. In class, everyone will discuss the readings and present their ideas about the topic in question.
- Students will be assessed by the quality of their writing, the level of understanding they bring to the readings and topics, and the quality of their in-class presentations and participation.
- Writing is a critical skill for all architects, one that they can use to communicate with clients, the public, and other Architects.

## REFERENCE BOOKS

1. Dave Saunders, *Professional Advertising Photography*, Merchurst, London 1988
2. Roger Hicks, *Practical photography*, Cassell, London 1996
3. Julian Calder and John Garrett, *The 35mm Photographer's Handbook*, Pan Books, London 1999
4. Julie Adair King, *Digital Photography for Dummies*, COMDEX, New Delhi 1998
5. Architecture and the Journalism of Ideas by Bender, Thomas
6. Architectural Criticism and Journalism by Mohammad al-Asad w/ Majd Musa
7. Nieman Reports: *Architectural Criticism: Dead or Alive* by Blair Kamin.
8. *The Failures of Architecture Criticism*, by Lance Hosey in the Huffington Post.
9. *Writing Architecture: A Practical Guide to Clear Communication about the Built Environment*, by Carter Wiseman

## REFERENCE WEBSITES

1. <http://niemanreports.org/articles/architecture-criticism-dead-or-alive/>
2. [http://www.huffingtonpost.com/lance-hosey/the-failures-of-architecture-criticism\\_b\\_6445858.html](http://www.huffingtonpost.com/lance-hosey/the-failures-of-architecture-criticism_b_6445858.html)
3. Architectural website, such as **archrecord.com**; **archpaper.com**; **archdaily.com**; and **dezeen.com**
4. Grace Farms designed by SANAA, article in Architectural Record by
5. Naomi R. Pollock. [http://archrecord.construction.com/projects/portfolio/2015/1511-Grace-Farms Kazuyo-Sejima-Ryue-Nishizawa-SANAA.asp](http://archrecord.construction.com/projects/portfolio/2015/1511-Grace-Farms-Kazuyo-Sejima-Ryue-Nishizawa-SANAA.asp)
6. <http://archrecord.construction.com/tech/techFeatures/2015/1509-Mass-Timber-Construction.asp>

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(E – VERNACULAR ARCHITECTURE)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- To highlight the role of Vernacular Architecture & lessons useful in contemporary context.
- To expose students to the varied vernacular and traditional architecture of India and the world.
- To understand the varied methods of using learnings from vernacular architecture by studying contemporary architects whose works have been influenced by the vernacular architecture of the region.

<b>Module-1</b>	<b>Introduction to Vernacular</b>	Definitions, Relevance, Role & scope of Vernacular Architecture, Issues of concern in present day architecture and causative forces of the vernacular form.
<b>Module-2</b>	<b>Lessons from Vernacular Architecture</b>	Varied Learnings including Sense of Place, Spontaneity & Variation, Control, Open ended form relationship, Symbols & Meanings.
<b>Module-3</b>	<b>Study of an Existing Settlement</b>	Detailed study of an existing settlement in the vicinity and analyse it for the aforementioned parameters to develop a design criteria for the studied context.
<b>Module-4</b>	<b>Case Studies</b>	Case Studies of Various Projects by Contemporary Architects which have taken inspiration from vernacular architecture. Works of Hasan Fathy, Laurie Baker, Luis Barragan, Charles Correa, B.V.Doshi, Revathi Kamath, Chitra Vishwanath, Auroville Centre, Gerard Cunha, Dean D Cruz and Raj Rewal.

**REFERENCE BOOKS:**

1. Architecture of the Indian desert, Kulbushan Jain & Meenakshi Jain, Aadi Centre, Ahmedabad
2. Encyclopaedia of Vernacular architecture of the World, Cambridge University Press
3. House, Form & Culture, Amos Rappoport, Prentice Hall Inc, 1969.
4. VISTARA – The architecture of India, Carmen Kagal. Pub : The Festival of India, 1986.
5. Oliver Paul. *Built to meet needs. Cultural issues in vernacular architecture.* Italy: Routledge 2006.Print.
6. Architecture Without Architects: A Short Introduction to Non-pedigreed Architecture by Bernard Rudofsky
7. Bhatia, Gautam, Laurie Baker, Life, Work, Writings, New Delhi, India, 1994 Penguin Books.

**B. ARCH. SEMESTER – IX**  
**NAR – 904, ELECTIVE - III(F – ART APPRECIATION)**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/ STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
1	2	0	15	35	50	50	0	50	100	3	3 HRS.

**OBJECTIVES**

- The knowledge and understanding of the universal and timeless qualities that identify all great art.
- To introduce the students to the importance of art in today's world and the purposes art has served from pre - historic through modern times in a variety of cultures both western and oriental.
- To understand artistic intent and expression through basic element of art and architecture and to increase appreciation of art in today's society.

<b>Module-1</b>	<b>Introduction &amp; Terminology</b>	Grammar of the language of art - Natural, Realistic, Symbolic, Abstract, Modern and Contemporary.
<b>Module-2</b>	<b>Ideologies of Aesthetics in Art</b>	Complete understanding of Ideologies of aesthetics in art while discussing the art of Western and Oriental. Plato, Aristotle, Baumgarten, Fredrich Nietzsche, I.A. Richards, Leo Tolstoy, Sigmund Freud. Shadanga: Six limbs of Indian painting. Rasa theory of 'Bharat Muni'. Iconography.
<b>Module-3</b>	<b>Development of Art</b>	Development of art over the period of time. Tracking the progress in art in aspects of the Functional diversity of styles, Art as form of social consciousness, Impact of Cultural and Religion on art, Understanding the role of art in contemporary society.

**APPROACH**

- Presentation would be made by the teacher. The students are expected to do library studies and seminars (Reports, Tutorials and PPT's) on varied topics to supplement the information base and make more interactive.

**REFERENCE BOOKS**

1. What Is Art For? (June 1, 1990) by Ellen Dissanayake.
2. Learning to Look: A Handbook for the Visual Arts (Phoenix Books) 2nd Revised ed. Edition by Joshua C. Taylor.
3. More Than Meets The Eye: Seeing Art With All Five Senses (Bob Raczka's Art Adventures) Paperback – October 1, 2003 by Bob Raczka.
4. How to Read a Painting: Lessons from the Old Masters Paperback – December 7, 2004 by Patrick De Rynck.
5. Learning to Look at Modern Art by Mary Acton.
6. Teaching with Khan Academy: Art for Beginners: A Curriculum Guide to Teaching Beginning Art History and Appreciation with Khan Academy Paperback – Large Print, November 8, 2012 by Beverly Fields.
7. Art: Over 2,500 Works from Cave to Contemporary Hardcover – October 20, 2008 by Iain Zaczek and Mary Acton.
8. Aesthetics- YURI BOREV.
9. Approaches to Art in Education- LAURA H. CHAPMAN.
10. Panorama of the Arts- RUDEL.



**B. ARCH. SEMESTER – X**  
**NAR – 1001, PRACTICAL TRAINING - II**

PERIODS			EVALUATION SCHEME						SUBJECT  TOTAL	CREDITS	DURATION  OF THEORY  PAPER
LECTURE	TUTORIAL	PRACTICAL/  STUDIO	SESSIONAL ASSESMENT			ESE					
			CT	TA	TOTAL	THEORY	VIVA	TOTAL			
-	-	-	-	-	-	-	-	-	-	-	-

**CERTIFICATE OF SATISFACTORY PERFORMANCE & COMPLETION OF TRAINING FROM THE TRAINING OFFICE IS MANDATORY**

**INTRODUCTION**

The tenth semester is for the student to join architectural offices for specialising in specific streams to pave way for master courses or continue working with that specific office after completion of their degree.

**Note:**

The final mark sheet / degree shall be awarded after the submission of certificate of satisfactory performance and completion of the training, duly signed by the architect of that training office, on a prescribed format provided by the Institute/ University.

The genuinity of certificate should be accessed by the presentation made by the student.