

**MASTER'S DEGREE PROGRAMME IN
LANDSCAPE ARCHITECTURE**



**REVISED SYLLABUS AND SCHEME OF EXAMINATION 2010 DULY APPROVED BY
BOARD OF STUDIES HELD ON 5TH JULY' 2010**



**IST SEMESTER MLA PROGRAMME DULY APPROVED IN PRINCIPLE IN ACADEMIC
COUNCIL MEETING HELD ON 16TH JULY' 2010**

SCHOOL OF PLANNING AND ARCHITECTURE
(Department Of Landscape Architecture)
(Deemed to be a University)
4th Block-B, Indraprastha Estate,
New Delhi-110002

PROPOSED**ANNEXURE 'A'****SCHOOL OF PLANNING AND ARCHITECTURE: NEW DELHI – 02**

(Department of Landscape Architecture)

MASTER'S PROGRAMME IN LANDSCAPE ARCHITECTURE

Revised Scheme of Examination & Syllabus 2010

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
SEMESTER-II						
				Int.	Ext.	Total
LA-6	Ecology, Ecosystems Analysis & Field Ecology	Theory + Practical	2	50 50	50	100 50
LA-7	Theory of Landscape Architecture-I	Theory	2	50	50	100
LA-8	Plants & Design	Theory + Studio	2+2	100	50	150
LA-9	Site Planning and Landscape Engineering-II	Theory	2	50	50	100
LA-10	Remote Sensing, Land Information Systems and GIS	Theory + Practical	2	50	50	100
LA-11	Landscape Architecture Studio-II	Studio	16	200	250	500
	Professional Communication-II		2	50		
TOTAL			30	600	500	1100
SEMESTER-III						
				Int.	Ext.	Total
LA-12	Landscape Economics, Management & Horticultural Practice	Theory + Practical	2	50	50	100
LA-13	Theory of Landscape Architecture-II	Theory	2	50	50	100
LA-14	Landscape Resources-I	Theory	2	50	50	100
LA-15	Dissertation	Seminar	6	100	100	200
LA-16	Landscape Architecture Studio-III	Studio	16	200	250	500
	Professional Communication-III		2	50		
TOTAL			30	500	500	1000
SEMESTER-IV						
				Int.	Ext.	Total
LA-17	Landscape Conservation and Regional Landscape Planning	Theory	2	50	50	100
LA-18	Landscape Project Management and Professional Practice	Theory	2	50	50	100
LA-19	Landscape Resources – II	Theory	2	50	50	100
LA-20	Landscape Architecture Studio-IV (Thesis)	Studio+ Theory	22	250	300	600
	Professional Communication-IV		2	50		
TOTAL			30	450	450	900
GRAND TOTAL			117	2050	1950	4000

SEMESTER-I

LA-1 PLANT SYSTEMATICS AND PLANT PROCESSES

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-1	Plants Systematic & Plant Processes	Theory + Practical	2	50	50	100

Introduction to the Plant Kingdom.

Basic plant structure/morphology/anatomy

Basic plant functions/growth & development/physiology

Principles of taxonomy / classification, identification and naming

Familiarity with local flora

Photosynthesis and respiration mechanism

General account of enzymes and metabolism

Growth regulators

Phytogeographical Regions of India

Ecological and Botanical considerations in landscape design

Application of Plant Physiography to sustainable landscape design such as use of CAM (Crassulacean acid metabolism) plants in Green roofs etc.

Method of Evaluation:

Internal evaluation shall be carried through class test, quiz or field experience.

SEMESTER-I

LA-2 GEOLOGY + SOILS

COURS E No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-2	Geology & Soils	Theory + Practical	2	50	50	100

GEOLOGY

Earth in space; *origin and interior of the earth.*

Early history of the Earth. The origin of life and meaning of fossils as keys to the past.

Earthquakes: *causes and effects, seismic microzonation, seismic zones of India.*

Minerals and Metals.

Rocks: Igneous, Sedimentary, Metamorphic.

Isostasy, plate tectonics, crustal deformation and mountain building.

Structural geology: dip, strike, folds, faults, joints, unconformities. Stratigraphy: principles, stratigraphy and geology of India.

Application of geological information in the interpretation of landscapes on maps and in the field.

The relationships between geology, soils and vegetation: Practical examples.

Mode of Evaluation:

Internal marking shall be done through, either, class test, quiz and field experience.

SOILS

Genesis, morphology and classification of soils.

Properties of Soils: Physical, Chemical, Biological and Mineralogical.

Soil use and Management:

(a) Soil evaluation and land-use planning.

(b) Soil and water conservation.

(c) Soil fertility and plant nutrition.

(d) Soil degradation control, remedial actions and reclamation techniques.

Managing difficult soils.

Mode of Evaluation:

Internal marking shall be done through, either, class test, quiz and field experience.

SEMESTER-I
LA-3 HYDROLOGY & GEOMORPHOLOGY

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-3	Hydrology & Geomorphology	Theory	2	50	50	100

HYDROLOGY

Hydrological Cycle and sources of surface water

Rainfall regime with specific reference to the Indian region

Characteristics and management of drainage basins: Introduction to watersheds

Types of Flow: channel and over-land

Occurrence and movement of ground water

Water bearing properties of geological formation, artesian conditions development of karst topography; saltwater intrusions

Aquifers recharge area, infiltration characteristics, rainwater harvesting, artificial recharge

Groundwater management, sources of ground water pollution and its control

Introduction to decision support systems

Mode of Internal evaluation:

Through class test, term paper or through quiz as per the requirement prescribed by the concerned teacher.

GEOMORPHOLOGY

Scope, *concepts*, methods and *approach*

Historical geomorphology: Landscape evolution models

Geomorphological processes: Endogenic, Exogenic, Extra-terrestrial. Major processes and associated landforms: Tectonic, fluvial, Aeolian, coastal, karst, glacial, and topography caused by ground water.

Climatic geomorphology and morphogenic regions.

Structural geomorphology, landforms developed on sedimentary sequences, volcanoes and volcanic landforms, pseudo structural landforms.

Running water and underground water; channel networks and drainage basins.

Hill slope geomorphology.

Landforms related to the activities of organisms and man.

Application of remote sensing in geomorphology.

Geomorphological features of the Indian subcontinent.

Mode of Evaluation:

By conducting a class test, quiz or appropriate method as suggested by the concerned teacher.

SEMESTER-I

LA-4 SITE PLANNING AND LANDSCAPE ENGINEERING-I

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-4	Site Planning and Landscape Engineering-I	Theory + Practical	3	100	100	200

Site planning process and its significance; establishing relationship between site characteristics and design requirements. Inventory, documentation and site planning checklist.

Site Survey and Appraisal; topographic surveys and their methodology, visualising landforms. Understanding contours and their characteristics, graphical representation, deriving contours by interpolation.

Earthform Grading; symbols and annotations, basic grading principles, grading terraces, grading of roads across/along contours, Basics of road alignment (horizontal and vertical)

*Surface Drainage: Site planning for efficient drainage; understanding drainage pattern and watershed area, calculation of surface runoff, determination of catchments area and discharge rate; types of drainage systems, design of drainage elements: swales and culverts etc.
Sub surface drainage planning.*

Planning, grading and drainage of sports fields.

Earthworks cut and fill processes, volume computations.

Landscape Construction: Factors in relation to systems, structures and materials for:

Circulation: Roads and Parking, paths and plazas.

Level Change: Wall, steps and ramps

Planting: Planters, beds, edges and terraces.

Water elements: Pools and water bodies.

Landscape simulation and site utilities: Basic planning and understanding of principles for:

External lighting; types of fixtures and their use in varying situations.

Irrigation: broad systems and their utility as per plantation typology.

Street furniture / site furnishings

Overall consideration of external electrical, plumbing co-ordination vis-à-vis routing and interface with landscape elements.

Landscape working drawings: Format and logical representation of information.

Overall organization of design drawings and data as respective package with relevant cross-referencing.

Mode of Evaluation:

Through studio assignments of one week to 2 weeks duration. The entire course of 100 marks to be divided into 4-5 assignments and same shall be periodically evaluated and at regular interval.

SEMESTER-I

**LA-5 LANDSCAPE ARCHITECTURE STUDIO-1
(3-4 Studio Projects)**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-5	Landscape Architecture Studio-I	Studio	14	200	250	450
	<i>Professional Communication I</i>		1+3	50		50

Readings in Landscape Architecture

Introductory exercises in Art, Architecture & Landscape

Urban and Rural Landscape appraisal

Landscape Analysis and Site Planning for medium sized sites (upto 2 Ha)

Landscape Design of small recreational or civic spaces.

Professional communication: Specific and focused exercises to develop language skills in verbal and written communication on subjects related to design, art and aesthetics and urban and rural environment.

Mode of Evaluation:

Professional communication skill shall be evaluated periodically through communication skill by judgement at the time of presentation by the concerned student.

IInd Semester

1. Pedagogic Method

- Lecture series, group discussions and studies based one to one interaction, punctuated with lectures. Use of audio-visual aids – slide show, video and documentaries. Group seminars or project by students. Works of selected Indian and International landscape architects and related topics.
- Lectures to clarify concept.
- Summer course of one month duration to orient students to application and design.

2. Learning Outcome

- Building on the inventory of knowledge of theory of landscape architecture and awareness through understanding of development of landscape design and gardens till the early 19th century including colonial landscape in India.
- Field work and analysis of ecological based data.
- Understanding the role of plants, Preparing graphics of planting plan, Plant schedule, Estimation of costs, and Bills of quantity.
- Knowledge of computer skill with special emphasis to application of remote sensing and G.I.S; to assimilate and present data for further analysis
- Strengthen professional communication through interaction with agencies associated with planning and design.

SEMESTER-II

LA-6 ECOLOGY, ECOSYSTEM ANALYSIS AND FIELD ECOLOGY

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-6	Ecology, Ecosystems Analysis & Field Ecology	Theory + Practical	2	50 50	50	100 50

Evolution: Earth and Life

Concept of Ecosystem: General Structure and Function:

- i) *Energy flow, Primary & Secondary Production*
- ii) *Types of Biogeochemical cycles; Carbon cycle, Global water cycles, nitrogen cycle bioaccumulation and biomagnifications and*
- iii) *Analysis and evaluation. Concept of ecosystem services.*

Types of Ecosystems

The Plant Community: General

- i) Structure,
- ii) *Concept of ecological Succession and Maturity, Types of succession*
- iii) Analysis,
- iv) Description and Evaluation

Systems Ecology: Introduction to systems approach and mathematical models in ecology

Population Dynamics:

Selected topics in ecosystem management:

Climate change – causes and consequences.

Aquatic ecology – fresh water and marine

Field ecology: Quadrat, line transect, community analysis

Field work and laboratory analysis of data

Mode of Evaluation:

The internal assessment shall be conducted through, test, quiz and field data etc.

SEMESTER-II

LA-7 THEORY OF LANDSCAPE ARCHITECTURE

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-7	Theory of Landscape Architecture-I	Theory	2	50	50	100

Dialogue on developing an analytical approach to the study of theory; developing an attitude towards critique and evaluation of choices for design decisions in varied contexts of space and time. Appreciation of scale in terms of garden, landscape and nature.

An outline of the chronology of development and evolution of landscape and garden design in relation to art, architecture and city planning from the earliest period to the present day: towards a comprehensive and inclusive vision of Landscape Architecture.

Changing perceptions of man's relationship with nature in various phases of history; responses and attitudes to nature and landscape resources as a function of this perception. Environmental and Behavioral theories: Entropy, Prospect and Refuge, Defensible space etc. An introduction to social and cultural dimensions of landscape.

Ancient Indian traditions; siting of structures, complexes and cities; symbolic meanings and sacred value attributed to natural landscapes; traditional landscapes such as ghats, gardens, kunds, sacred groves etc. Landscape in myth and poetry.

The comparative analysis of examples of landscape separated in time and space: siting, relationship to surroundings, use of landscape elements, function, scale, symbolism, etc. Illustrative range of examples from various geographic locations and periods, highlighting aspects of Form, Space and Order.

Development of landscape design and gardens till the early 19th century: Detailed study of selected examples from Eastern, Central and Western traditions;

Ancient Heritage: Mesopotamia, Egypt, Greece, Rome
Western Civilization: Europe; Italy, France, and England
The middle-east: The Persian tradition and its far reaching influence
Eastern Civilisation: China and Japan
Ancient and medieval period in India; Mughal and Rajput Landscapes.

Influences and linkages across cultures and traditions, e.g Chinese tradition and the English Landscape style, influence of Persian traditions towards the West and East.

Colonial landscape development in India

Mode of Evaluation:

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-II**LA-8 PLANTS & DESIGN**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-8	Plants & Design	Theory + Studio	2+2	100	50	150

Criteria for plant selection

Planting design through the ages - a historic perspective.

Planting as a design element for structuring the landscape.

Differentiation between trees, shrubs, ground cover and creepers.

Planting for appearance of form, leaf color and texture, branching habit and trunk form and their texture, color of flowers and fruits. Spring, winter summer and autumn variation in appearance.

Visual aesthetic and functional considerations in planting design. Planting for visual effect and accent. The role of plant material in environmental improvement, (e.g. soil conservation, modification of microclimate). Planting for shelter, windbreaks and shelter belts.

Planting in various environments such as woodlands, forests, rural areas, urban areas, roadside planting in urban and rural areas, industrial sites etc.

Planting design for habitat such as grasslands, woodlands, sloping areas, marshes, bogs, wetlands, waterside and aquatic planting etc.

Planting design and ecological considerations, stratification of plant material in nature, herbal plants and their uses.

Plants and sustainability.

Growth rate of plants as a criteria for plant choice for particular situations. Comparison of advantages and disadvantages of fast, medium and slow growing trees. The concept of nurse planting. Creating conditions for plant establishment, planting and transplanting trees and shrubs.

Maintenance of plant material.

The preparation of planting concepts, planting plans and plant schedules for various scales of project. Estimation of costs and Bill of quantity.

Site Visit:

Summer course at least of one month duration is a must to get a feel of the subject and its application in design.

Mode of Evaluation:

The evaluation shall be done through assignment given periodically, visit to the identified sites and visit during summer vacation to the various Botanical garden.

SEMESTER-II**LA-9 SITE PLANNING AND LANDSCAPE ENGINEERING-II**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-9	Site Planning and Landscape Engineering-II	Theory	2	50	50	100

Components of Landscape Engineering and their consideration in Site Planning and Landscape design. Appraisal of site factors in large scale developments with above correlation. Use of relevant software and advanced mapping technology for analysis.

Site mobilisation; Sequence of site activity, site protection measures, site implementation checklist.

Landscape Engineering and water conservation; Watersheds and their characteristics, protection of natural water bodies: water retention structures, water harvesting techniques and devices.

Understanding Land/environmental modifications and engineering intervention in :

Soil conservation and erosion control measures.

Land reclamation and rehabilitation process.

Disposal of sludge, fly-ash, solid and liquid waste.

Strip-mines and quarries.

Transportation corridors.

Horticulture and Forestry techniques.

Environment-friendly material specifications and methodologies in landscape, to reduce carbon footprint

Energy saving techniques in landscape engineering for planning of services and utilities. Design parameters and certification criteria for green buildings.

Evaluating energy efficient site planning and landscape development.

Design of sustainable landscape features such as bioswales, bio retention ponds etc.

Estimation of costs for civil works and plantation works.

Preparation of bill of quantities, specifications and Tender documents.

Mode of Evaluation:

The evaluation shall be done through assignment given periodically, visit to the identified sites and visit during summer vacation to the various Botanical garden.

SEMESTER-II

LA-10 REMOTE SENSING, LAND INFORMATION SYSTEMS & GIS

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-10	Remote Sensing, Land information Systems and GIS	Theory + Practical	2	50	50	100

Remote Sensing, Land Information System & GIS

1. **Concept and Foundation of Remote Sensing**
2. **Elements of Photographic System**
Types of Aerial Photographs:
Vertical Photographs,, Oblique Photographs, Satellite Imagery
3. **Introduction to Air Photo Interpretation**
4. **Photogrammetry for Map Making**
Introduction /Definition
Geometric Elements of a Vertical Photograph
Relief Displacement
Ground Control for Aerial Photography
5. **Digital Image Processing**
6. **Applications**
Geologic & Soil mapping
Land-use / land cover Mapping a) Land use Classification
Agriculture Applications
Forestry Applications
Water resource Applications:
a) Water Pollution Detection b) Flood Damage Estimation
Urban & Regional Planning Applications
Wetland mapping
7. **Geographical Information Systems**
Definition
Composition of Geographical Information System
Computer Hardware Module
GIS Software Module
Data Input, Data Storage, Data Output
Database Structures
8. **Presentations / Workshop**
Application of GIS & Remote Sensing
Automated Mapping / Facility Management. (AM/FM)
3-D GIS Digital Elevation Model & Digital Terrain Model
Digital Image Processing and Editing; Error Detection and Correction
Geo Spatial Analysis : Turning Data into Meaningful information.
Comparison of Vector & Raster Methods
Internal G.I.S.
Network Analysis
Open GIS

Mode of Evaluation:

Mode of Internal evaluation shall be on the basis of class test/laboratory experiences at G.I.S. Lab.

SEMESTER-II**LA-11 LANDSCAPE ARCHITECTURE STUDIO-II**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-11	Landscape Architecture Studio-II	Studio	16	200	250	450
	<i>Professional Communication -II</i>		2	50		50

Exercise related to the application of ecological principles in a range of situations and directed towards understanding and proposing design possibilities in:

- Urban Open Space systems
- Rural Landscape
- Heritage and Cultural Landscape

Professional Communication II : Advanced language skills in relation to technical writing and professional communications with agencies associate with planning and design, for example: Planning authorities, Statutory bodies, Clients, Contractors, other professionals.

Mode of Evaluation:

Professional communication skill shall be evaluated periodically through communication skill by judgement at the time of presentation by the concerned student.

IIIrd Semester

1. Pedagogic Method

- Lecture series, group discussions and studies based one to one interaction, punctuated with lectures. Use of audio-visual aids – slide show, video and documentaries. Group seminars or project by students. Works of selected Indian and International landscape architects and related topics.
- Lectures to clarify concept.

2. Learning Outcome

- Through understanding of open space development. Changing concepts of space and the relationship of landscape architecture illustrated through study of selected works of modern Masters. Artistic sensibility in Landscape Architecture and land art, landscape inventory and conservation of historical landscape. Understanding Land Economics and Management practices through site visits to Botanical gardens Nurseries and well established landscapes.

SEMESTER-III

LA-12 LANDSCAPE ECONOMICS, MANAGEMENT AND HORTICULTURAL PRACTICE

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-12	Landscape Economics, Management & Horticultural Practice	Theory	2	50	50	100

Economics: Cost and benefits related to open space development; Tangible costs of development; capital and maintenance costs: intangible costs, depletion of natural resources, modification of ecological systems rehabilitation cost, social and cultural changes. Unit cost of development of open space.

Management: Landscape management at the regional scale in relation to soil conservation, water management, grassland management, forestry and agriculture.

Management practices related to urban ecology and urban habitats, such as urban forests, river banks, regional parks and green belts: ecological, economic and administrative issues. Management models.

Horticulture Practice: Nursery establishment and Plant propagation. Establishment and maintenance of grass, shrubs and trees with respect to: ground preparation, planting and transplanting, pruning.

Horticulture practice and maintenance. Common plant pests, diseases and their control; manures and insecticides and their application. Protection of plant material. Water Budgeting. Equipment for landscape maintenance.

Mode of Evaluation:

The internal evaluation shall be conducted through class test/quiz and term paper as per requirement of the concerned teaching staff.

SEMESTER-III

LA-13 THEORY OF LANDSCAPE ARCHITECTURE-II

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-13	Theory of Landscape Architecture-II	Theory	2	50	50	100

Nineteenth Century Europe: The socio-cultural impact of industrialization and urbanization; its effect on public health legislation and the development of new landscape types, public parks and facilities for sports.

Open space development in its urban design and planning context. Early industrial towns and the Garden City movement.

USA: Further evolution of the public park as a major component of urban landscape. The work of F. L. Olmsted and other pioneers. Park-Systems and suburban development centered on open space.

The Modern Movement: changing concepts of space and the relationship of architecture and landscape illustrated through studies of selected works of the modern masters.

Post-war development in Europe: New Towns in England and the concept of Landscape Structure.

Landscape Urbanism; Examples of open space development in new towns and urban renewal to illustrate the close conceptual relationship between town planning, urban design and landscape architecture (e.g. Haussmann's Paris, Lutyen's Delhi).

The influence of Ian McHarg on mid and late 20th Century landscape architecture. *The work of selected twentieth century landscape architects, in the west as well as in India.*

Contemporary concepts and concerns: "Green" Architecture and Energy-Saving site planning and Landscape Architecture;

Cultural landscapes, their definition, identification, characteristics and polices; Landscape inventory and conservation of historical landscape

Artistic sensibility in Landscape Architecture, land art; new developments in urban landscape design.

The Indian Context: Understanding contemporary attitudes to open space design in India: ancient horticultural tradition, Mughal influence, British colonial influence. Trends in landscape design in India in the late 20th and the first decade of the 21st Century; the search for a theoretical basis. Development and evolution of the landscape profession in India.

Mode of Evaluation:

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-III

LA-14 LANDSCAPE RESOURCES-I

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-14	Landscape Resources-I	Theory	2	50	50	100

Settlements and Landscape: Siting and evolution of cities in relation to regional landscape resources. The role of landform, water systems, climate and vegetation. Illustrative studies of cities in India and elsewhere.

Microclimate: Definition and characteristics. The role of landscape components in modifying microclimate with respect to temperature, humidity, precipitation, air corridors, heat islands, wind speed etc., in cities.

Evaluation of microclimate data.

Air pollution and Bio-meteorology; climatic comfort indices; heat transfer; meteorological instrumentation and plant injury; *Types of air pollutants, sources and consequences. Air pollution and plants. Air pollution monitoring and quality criteria*

Threats to urban landscape resources; urban environmental issues such as solid waste management, air quality, conservation of water resources and vegetation cover.

The urban forest: It's ecological social and environmental dimensions. Ways of studying urban vegetation. Its role in the urban landscape.

Landscape heritage: Open space systems, cultural and sacred landscapes, their typology and role in the development of cities. Landscape resources specific to distinctive city types: for example: religious centers, historic cities, coastal or port cities, hill station etc.

City development Plans, Zonal Plans and structure plan. Development controls and their role in the conservation and creation of urban landscape.

Mode of Evaluation:

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-III

LA-15 DISSERTATION: SEMINAR

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-15	Dissertation	Seminar	6	100	100	200

Topics related to various aspects of Landscape Architecture would be chosen in consultation with faculty members, comprehensively researched, and findings presented in a series of seminars by individual students.

The materials would be documented and formally presented as a Dissertation at the end of the semester.

The dissertation would be of a length of between 3000 and 4000 words with illustrations, references, footnotes and annotations.

Mode of Evaluation:

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-III**LA-16 LANDSCAPE ARCHITECTURE STUDIO-III**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-16	Landscape Architecture Studio-III	Studio	16	200	250	450
	<i>Professional Communication III</i>		2	50		50

Relatively large scale exercise of analysis and proposals related to Landscape of:

- *Institutional Campuses*
- Urban civic spaces at urban design scale, and
- Transportation and interchange systems and complexes
- Eco-Tourism projects.

Professional Communication III: Professional techniques in digital media.

Mode of Evaluation:

Professional communication skill shall be evaluated periodically through communication skill by judgement at the time of presentation by the concerned student.

IVth Semester

1. Pedagogic Method

- Lecture series, group discussions and studies based one to one interaction, punctuated with lectures. Use of audio-visual aids – slide show, video and documentaries. Group seminars or project by students. Works of selected Indian and International landscape architects and related topics.
- Lectures to clarify concept.

2. Learning Outcome

- Through understanding of the regulations and legal aspects with reference to professional practice.
- Construction administration, implementation process and documentation.
- Understanding the techniques and criteria for Regional Landscape Resource, Landscape Conservation and E.I.A through illustrative examples.
- Knowledge of computer skills to assimilate and present data for further analysis at Landscape issues at Regional level Land planning.
- Application of skills and techniques acquired in the previous semesters to specialized requirements of the thesis including the use of video and other digital multi media for a short specific exercise related to presentation of thesis work.

SEMESTER-IV

LA-17 LANDSCAPE CONSERVATION AND REGIONAL LANDSCAPE PLANNING

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-17	Landscape Conservation and Regional Landscape Planning	Theory	2	50	50	100

The concept of Landscape Planning and Landscape Conservation: definitions and scope.

Landscape Assessment techniques; Basic quantitative methods of collecting, analyzing, projecting and presenting data for Landscape Planning.

Application of G.I.S. and Remote sensing in Regional Landscape Planning.

Landscape Conservation: Priorities, Policies and Programmes. National parks and other protective designations. Biodiversity and Biosphere reserves. Endangered landscapes. Aspects of watershed management.

The application of landscape planning techniques to large scale developments such as infrastructure and power projects, extractive and manufacturing industry, new towns and urban extensions, and developments for tourism and eco-tourism.

Landscape perception, visual assessment and the aesthetic dimension of landscape planning.

Environmental Impact Assessment and the Environmental Impact Statement: Theory and Practice. Illustrative examples from India and elsewhere to demonstrate the degree of effectiveness. The role of Environmental Legislation and the Ministry of Environment and Forests.

Mode of Evaluation:

The internal evaluation shall be conducted through class test/quiz and term paper as per requirement of the concerned teaching staff.

SEMESTER-IV**LA-18 LANDSCAPE PROJECT MANAGEMENT AND PROFESSIONAL PRACTICE**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-18	Landscape Project Management and Professional Practice	Theory	2	50	50	100

(a) Regulations and Legal Aspects

Codes, Standards, Bye laws and planning regulations applicable to building and landscape development. *The role of statutory and regulatory bodies such as the Municipal Corporation, N.D.M.C, D.D.A and Urban Art commission etc.*

(b) Construction administration , Implementation process

Sequence of activities from inception to completion: agencies involved at each stage, their professional relationships and obligations. Co-ordination of agencies and activities on site. Practical examples.

Budgetary control, progress evaluation and monitoring: various kinds of estimates, review and updating, simple examples of pert charts and bar diagrams.

Site documentation: importance of written records. Site instruction book, periodic reports, visual records, bar charts etc.

Techniques of inspection and quality control; visits to site under development.

(c) Construction documents

Contract Procedure; Criteria for selecting contractors: the process of calling tenders. Comparison of various kind of tenders with regard to objectives, utility and appropriateness.

Tender Documentation and evaluation of tender; negotiations with contractors.

Contract Documentation: Forms of contract; General and special conditions, specifications, Bill of quantities; significant clauses pertaining to defects, maintenance, arbitrations, etc.

Parties to the contract; their roles, contractual relationships and legal obligations.

(d) Professional Practice

Types of client: Private, Government, Corporate etc. The scope and meaning of professional services.

Professional relationship between client and Landscape Architect: Forms of agreement, conditions of engagement, scope of work and services to be provided.

Scale of Professional Fees: Common and accepted methods of charging fees, percentage, lump sum, time-basis etc. Calculation and estimation of fee based on work involved. Taxes, remuneration and reimbursement.

Role of Professional Institute: Professional code of conduct. Relationship of Landscape Architect with other professionals.

Practical illustrations of various aspects of Client-Landscape Architect transactions, especially with regards to the establishment of credibility and trust.

(e) Landscape Design Competitions: Types, Guidelines**Mode of Evaluation:**

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-IV

LA-19 LANDSCAPE RESOURCES-II

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	Total
LA-19	Landscape Resources-II	Theory	2	50	50	100

Overview of landscape resources at the national level.

National Environment Policy.

Developmental and Environmental issues associated with particular landscape regions: mountain and hill areas; deserts and wastelands; river and aquatic systems, coastal and estuarine regions, etc.

The rural landscape: agriculture and forestry as competing uses, the impact of industry and power generation.

Forest types of India; introduction to Forest Policy and management of forest resources. Conservation Forestry, Agro-Forestry and Social Forestry.

Significance of biodiversity, urban biodiversity, wildlife conservation.

Agricultural practices and the formation of traditional rural landscape. Illustrative examples from different climatic and geographic regions.

Factors associated with the location and functioning of extractive and manufacturing industry in the rural landscape.

Wetlands: definition, wetland values and conservations. Wastelands management. Land reclamation and rehabilitation.

Watersheds and the importance of watershed management. Resource conservation, land capability classification; mechanical, vegetative and agronomic measures in soil and water conservation.

Techniques and criteria for evaluation of regional landscape resources.

Mode of Evaluation:

The internal evaluation shall be conducted by the concerned teacher through test, reports and assignment as given by the concerned teacher.

SEMESTER-IV

**LA-20 LANDSCAPE ARCHITECTURE STUDIO-IV
(Landscape Architecture Thesis)**

COURSE No.	SUBJECT	Theory/ Studio/ Practical	Hrs. per week	Max. Marks		Total
				Int.	Ext.	
LA-20	Landscape Architecture Studio-IV (Thesis)	Studio+ Theory	22	250	300	550
	<i>Professional Communication IV</i>		2	50		50

Landscape Architecture thesis will consists of two parts:

- (a) Research oriented towards establishing a strong theoretical background for the chosen subject.
- (b) Application to a Landscape Planning or Landscape Design proposal with appropriate details.

Professional Communication III: Application of skills and techniques acquired in the past three semesters to specialized requirements of the Thesis, including the use of video or other digital multimedia for a short, specific exercise related to presentation of thesis work.

Mode of Evaluation:

Professional communication skill shall be evaluated periodically through communication skill by judgement at the time of presentation by the concerned student.