

# Master of Architecture [Landscape Architecture]

## Course Outcome

Course Code: MLA11

Course title: Landscape Architecture Studio-I

Course Code	MLA11																														
Course Title	Landscape Architecture Studio-I																														
Credit	12																														
Teaching per Week	12 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an understanding about space design at local level																														
Course Outcomes	<p>CO1: Landscape Analysis of small recreational or civic spaces at community level for medium sized sites of area up to 2 Hectare</p> <p>CO2: Landscape Design of small recreational or civic spaces at community level for medium sized sites of area up to 2 Hectare</p> <p>CO3: Site Planning of small recreational or civic spaces at community level for medium sized sites of area up to 2 Hectare</p> <p>CO4: Application of the learning from other subjects of the present semester to add value to the Studio outcome</p>																														
Mag between COs with PSO	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Studio project in Landscape Analysis, Landscape Design and Site Planning of small recreational or civic spaces at community level for medium sized sites of area up to 2 Hectare; Students are expected to incorporate the learning from other subjects of the present semester to add value to the Studio outcome. Various materials, which can be used on Site for different components of the built form, may be explored through Site visits and observatory studies. Design may be a cumulative result of an informed decisions of varied nature with due care to prevent Soil erosion, promote ground water recharge processes</p> <p style="color: orange;">Understanding and Conseptualisation of Landscape Design Interventions/</p> <p style="color: green;">Justification of Landscape Design Interventions / Detailing of Landscape Design Interventions</p>																														

## Master of Architecture [Landscape Architecture]

Reference Books	<ol style="list-style-type: none"><li>1. C, H.T. (n.d) Land Form Designs , P D A Publication.</li><li>2. H, P.P. (n.d) Concrete Floors Finishes .</li><li>3. Michael, L. (1988) Tree Detailing, London: Butterworth Architecture.</li><li>4. Michael, L. (n.d) Landscape Detailing Vol.1 Enclosure.</li><li>5. Stevens, D. (n.d) Ultimate Water Garden Book.</li></ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)

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Master of Architecture [Landscape Architecture]

Course Code	MLA12																														
Course Title	Plant Systematics, Plant Processes, and field Study																														
Credit	6																														
Teaching per Week	6 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an understanding of the plant material in Landscape Design. Examine the characteristics of Plants with reference to the plant material in design. Field trips with experts are required to identify the specific characteristics of the plants. Students are required to prepare a herbarium.																														
Course Outcomes	CO1: To develop an understanding of the plants and systems influencing in Landscape Design  CO2: General study of plant morphology and anatomy to understand the plant functions.  CO3: Classification of Plant Kingdom. Taxonomy. Principles of nomenclature and identification  CO4: Structural characteristics of plants, trees, shrubs and ground covers																														
Mapping between COs with PSOs	<table border="1"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-3					
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Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	Unit – I Fundamentals of plants, identification of physiological characteristics, deciduous and evergreen, and user's pattern  Unit – II General study of plant morphology and anatomy to understand the plant functions.																														

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	<p>Unit – III Plant identification criteria: growth habits, habitat, origin, growth duration, leaf arrangement, leaf type, main flower colour, flowering period, family, genus</p> <p>Unit – IV Classification of Plant Kingdom. Taxonomy. Principles of nomenclature and identification.</p> <p>Unit – V Structural characteristics of plants, trees, shrubs and ground covers. Plant formations in Eco zones. Interdependence of animals and plants Field visit(s) required to identify the characteristics of various flora, by visiting a greenhouse / Nursery / seedbed.</p>
Reference Books	<p>1. Randhwa, M.S. (1957) Flowering Trees , New Delhi: Indian Council Of Agricultural Research.</p> <p>2. H, S. (1966) Common Trees –India, The Land And the People , New Delhi: National Book Trust.</p> <p>3. Bose, T.K., Chowdhury, B. and Sharma, S.P. (2011) Tropical Garden Plants in Colour, New Delhi: Horticulture And Allied Publishers.</p> <p>4. M., L. a. G. H. (1964) Taxonomy of Vascular Plants, New York: Oxford. P, M. (2008) Trees of India (WWF Natures Guide), London: Oxford; Edition edition.</p> <p>5. Raunkier, C (1934) The Life forms of Plants and statistical Plant Geography, London: Oxford At The Clarendon Press. S, R. M. (1971) Flowering trees (India-The land and people), New Delhi: National Book Trust.</p> <p>6. S. G, N. (2004) Forest Trees of South India , Bengaluru: Navabharath Press</p>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>

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## Master of Architecture [Landscape Architecture]

Course Code	MLA13																														
Course Title	Theory of Landscape Architecture - I																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To equip the students with the knowledge base regarding history of landscape Architecture with the various theories that have guided the landscape design through the ages.																														
Course Outcomes	<p>CO1: To equip the students with the knowledge base regarding history of landscape Architecture with the various theories that have guided the landscape design through the ages.</p> <p>CO2: Relating landscape design to societal, cultural, technological and belief systems of the period</p> <p>CO3: Man, and nature, Process of transforming landscapes</p> <p>CO4: Cultural landscapes: identity, collective memory; landscape as text, Landscape as an Art</p>																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <th>CO-1</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> </tr> <tr> <th>CO-2</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <th>CO-3</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-4</th> <td></td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Unit – I Traces of landscape planning and design from pre-history through Eastern, Egyptian, Roman, Islamic and Medieval gardens to Renaissance, Italian, French and English landscape approaches, culminating in the mid-19th century.</p> <p>Unit – II Relating landscape design to societal, cultural, technological and belief systems of the period. Study of works of renowned Landscape Architects and Architects</p> <p>Unit – III Man and nature, Process of transforming landscapes; landscapes of Power, Faith and Place. Development of landscape design and gardens till the early 19th century.</p> <p>Unit – IV Detailed study of selected examples from eastern, central and western traditions; Ancient: Mesopotamia, Egypt, Greece, Rome Western: Europe, Italy, France, England Middle-east: Persian</p>																														

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	<p>traditions Eastern: China and Japan; ancient and medieval period in India; Mughal and Rajput Landscapes</p> <p>Unit – V Cultural landscapes: identity, collective memory; landscape as text, Landscape as an Art. Theoretical terrain of landscape architecture: nature of theory in landscape architecture, design process, form, meaning and experience. Society, language, representation of landscape; ecological design, aesthetics of sustainability</p>
Reference Books	<ol style="list-style-type: none"> <li>1. Schaal ,Hans Dieter (1993) , New Landscape Architecture, Ernst and Sohn</li> <li>2. Dee, C. (2001) Form and Fabric: A Visual Introduction, London: Spon Press- Taylor and Francis Group.</li> <li>3. etal., A.a. (n.d) Building and Landscape.?</li> <li>4. G.B.Tobey (1973) A history of American Landscape architecture, American elsevier Publishing Co.,NY.</li> <li>5. Hill, P. (2004) Contemporary history of garden design , Birkhauser publishers.</li> <li>6. Jellico, G.a.S. (1995) The Landscape of Man, Thames &amp; Hudson Publication.</li> <li>7. Lehrman, J. (1980) Earthly Paradise- Garden and courtyard in Islam, Thames and Hudson.</li> <li>8. Maria, C.B.J. (n.d) Mastaedi Arain: Landscape Design Today, Spain .</li> <li>9. Newton, N.T. (n.d) Design on the Land: The Development of Landscape Architecture .</li> <li>10. Repishti, P.a.F. (2003) Dictionary of today’s landscape designers, SkiraEditores P.A</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>

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Course Code	MLA14																														
Course Title	Site Planning and Landscape Engineering - I																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an advanced understanding of a site and the surroundings, with a whole-to-part approach on a holistic basis. Students must examine the natural, cultural, and social systems that affect design decisions, as well as the language and literature of landscape architecture. Studies to be undertaken on land development planning to appraise students in environmental, economic, legal, and visual issues associated with land planning process																														
Course Outcomes	<p>CO1: To develop an advanced understanding of a site and the surroundings, with a whole-to-part approach on a holistic basis</p> <p>CO2: Site mobilisation; Sequence of site activity, site protection measures, site implementation checklist</p> <p>CO3: Environment-friendly material specifications and methodologies in landscape, to reduce carbon Footprint.</p> <p>CO4: Estimation of costs for civil works and plantation works. Preparation of bill of quantities, Specifications and Tender documents</p>																														
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Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Components of Landscape Engineering, Site mobilisation, Soil conservation and erosion control measures and Estimation of costs for civil works and plantation works</p> <p>Unit – I 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.</p> <p>Unit – II Site mobilisation; Sequence of site activity, site protection measures, site implementation checklist. Landscape Engineering and water conservation; Watersheds and their characteristics, protection of</p>																														

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	<p>natural water bodies: water retention structures, water harvesting techniques and devices.</p> <p>Unit – III 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.</p> <p>Unit – IV 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.</p> <p>Unit – V Estimation of costs for civil works and plantation works. Preparation of bill of quantities, Specifications and Tender documents</p>
Reference Books	<ol style="list-style-type: none"> <li>1. ines, C.W.H.N.T. (2001) Time saver Standards for Landscape Architecture, Mc. Graw Hill.</li> <li>2. Hack, K.L.a.G. (1984) Site Planning , MIT PRESS.</li> <li>3. Hamid, S. (1985) Urban Design Process , Van Nostrand Reinhold.</li> <li>4. Hopper (n.d) Landscape Architectural Graphic Standards Student Ed., John Wiley and Sons Inc.</li> <li>5. Ingels, J.E. (1992) Landscaping – Principles &amp; Practices , Pelmer Publishers Inc.</li> <li>6. Lovejoy, D. ( 1973) Land use and Landscape Planning, Barnes &amp; Noble.</li> <li>7. Lynch, K. (1994) A Good City Form , MIT PRESS. 8. Mukoda, N. (1990) Street furniture, Bijutsushuppan – sha Ltd. 9. Niall, K.a. (n.d) The Art of Landscape Detail: Fundamentals, Practices and Case Studies</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>



## Master of Architecture [Landscape Architecture]

Course Code	MLA15																														
Course Title	Environmental Legislation and EIA																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To Familiarize The Students To The Environmental Legislation And Its Components And It's Role In Checking The Damage To The Environment																														
Course Outcomes	<p>CO1: To Familiarize the Students to The Environmental Legislation and Its Components</p> <p>CO2: Human Impact On Ecosystems Environmental Impact Of Man's Activities On Earth</p> <p>CO3: Environmental Impact Assessment – Definitions, Methodologies, Techniques, Advantages And Disadvantages</p> <p>CO4: Conservation And Preservation Legislation</p>																														
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Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>UNIT 1 <b>Components Of Environment Environmental Sciences</b>, Environment – Definition, Important Components, Quality Of Total Environment.</p> <p>UNIT 2 <b>Human Impact On Ecosystems Environmental Impact Of Man's Activities On Earth</b>, Impacts Of Agriculture, Industrialization, Urbanization. Relations Between Local Modification And Global Phenomena. Green House Effect, Acid Rain Etc., Pollution – Definition, Pollution Of Air, Water, Land And Noise, Effect On Humans, Vegetation And Other Life Forms, Degradation Of Land. International Treaties On Environment, Sustainable Development –</p>																														

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	<p>Ecological And Environmental Parameters, Public Participation And Role Of Ngos. Status Of Environment In India.</p> <p>UNIT 3 <b>Environmental Legislation Concept Of Law Constitution In Relation To Environment.</b> Introduction To Town Planning Legislation And Legal Tools For Development Control And Their Relationship For Landscape Design Objectives. Indian Forests Acts – Preserved, Protected, Private And Village Forests, Wild Life Sanctuaries Act. Legislative And Administrative Framework For National Parks In U.K., U.S.A. And India. Periphery Control Legislation And Green Belt Concept. Preservation Of The Countryside.</p> <p>UNIT4 <b>Conservation And Preservation Legislation Relating To Preservation</b> Of Parks, Open Spaces, Playgrounds, Trees And Ancient Monuments. Legislation Related To Air, Water, Land Pollution Prevention</p> <p>UNIT 4 <b>Environmental Impact Assessment</b> Environmental Impact Assessment – Definitions, Methodologies, Techniques, Advantages And Disadvantages. Process – Data Collection, Identification Of Study Area, Scope, Aim, Environmental Standards And Their Measurement. EIA In India, Legislation Related To EIA, EIA In Developed And Developing Countries</p>
Reference Books	<ol style="list-style-type: none"> <li>1. Michael Allaby, Basics Of Environmental Science, Routledge, 2000.</li> <li>2. Avjit Gupta And Mukul.G.Asher, Environment And The Developing World, John Wiley And Sons, Inc, 2000.</li> <li>3. Larry W.Canter, Environmental Impact Assessment, Mcgraw – Hill, Inc,1996</li> <li>4. H.N.Tiwari, Environmental Law, Allahad Law Agency, 1997. 5. Rosencrany, A.Diwan, Noble.M, Environmental Law And Policy In India (Cases, Materials, And Statutues), Tripathi Bombay, 1991</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>



## Master of Architecture [Landscape Architecture]

Course Code	MLA16																														
Course Title	Sustainability and Energy Conservation in Landscape Architecture																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To expose the students on the issues of sustainability at the global level. To focus on the energy conservation landscape and sustainability at the micro level. Sustainable landscape design for various climates of Indi																														
Course Outcomes	CO1: Introduction To Sustainability Need and concept of sustainability  CO2: Introduction To Energy Conservation In Landscape Energy conservation and sustainability  CO3: Energy Conservation Methods In Landscape Architecture  CO4: Sustainable Landscape Practices																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <th>CO-1</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-2</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-3</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-4</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p><b>UNIT 1 Introduction To Sustainability Need and concept of sustainability</b>, Brundtland report, World Commission on environment and development, sustainable development, sustainable growth, sustainable economy and sustainable use. Visions of sustainability. Source and ethics of sustainability. Sustainability and Climate Change</p> <p><b>UNIT 2 Sustainable Site Sustainable site – LEEDS, BREAM, rating erosion and sedimentation control</b>, site selection, urban development, landscape and exterior design etc., Green Building in the context of sustainability. Ecology and sustainability. Eco-City</p>																														

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	<p><b>UNIT 3 Introduction To Energy Conservation In Landscape</b> Energy conservation and sustainability, principles of energy systems, energy and global environment, scope for energy conservation in landscape.</p> <p><b>UNIT 4 Energy Conservation Methods In Landscape Architecture</b>-Case Studies Various methods of energy conservation in landscape architecture, energy conservation techniques in various climates- hot and humid, hot dry, etc. Energy efficient site planning and landscape development. Energy efficient planting design</p> <p><b>UNIT 5 Sustainable Landscape Practices Sustainable landscape maintenance and management</b>, Sustainable planning and city form. Sustainable urban landscape, landscape sustainability at the national and regional level</p>
Reference Books	<ol style="list-style-type: none"> <li>1. John.F.Benson and Maggie.H.Roe, Landscape and sustainability, John Wiley Publication, New York, 2000.</li> <li>2. O.R.Gray, Landscape Planning for Energy Conservation,</li> <li>3. Anne Simon Moffat and Marc Schiller, Landscape design that saves energy, William Monow and co.,Inc., New York, 1981.</li> <li>4. Publications of Centre for science and environments, TERI, New Delhi</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>



## Master of Architecture [Landscape Architecture]

Course Code	MLA21																														
Course Title	Landscape Architecture Studio-II																														
Credit	12																														
Teaching per Week	12 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop the skill to integrate various knowledge systems to arrive at a design proposal of an urban scale, the process used for the same																														
Course Outcomes	CO1: application of ecological principles CO2: Urban Open Space systems CO3: Rural Landscape CO4: Heritage and Cultural Landscape																														
Mapping between COs with PSOs	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-3</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-1																															
CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p style="color: #e67e22;">Exercise related to the application of ecological principles in a range of situations directed towards understanding and proposing design possibilities in:</p> <p style="color: #27ae60;">Urban Open Space systems</p> <p style="color: #27ae60;">Rural Landscape</p> <p style="color: #e67e22;">Heritage and Cultural Landscape</p>																														
Reference Books	<p>1. C, H.T. (n.d) Land Form Designs , P D A Publication.</p> <p>2. H, P.P. (n.d) Concrete Floors Finishes .</p>																														

Master of Architecture [Landscape Architecture]

	<p>3. Michael, L. (1988) Tree Detailing, London: Butterworth Architecture.</p> <p>4. Michael, L. (n.d) Landscape Detailing Vol.1 Enclosure.</p> <p>5. Stevens, D. (n.d) Ultimate Water Garden Book.</p>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/Jury)

*Almohli*



## Master of Architecture [Landscape Architecture]

Course Code	MLA22																														
Course Title	Plants and Design																														
Credit	6																														
Teaching per Week	6 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an enhanced understanding of the plant material in Landscape Design and to examine the characteristics of Plants with reference to the plant material in design																														
Course Outcomes	CO1: Planting design through the ages - a historic perspective  CO2: Visual, aesthetic and functional considerations in planting design.  CO3: Plants and sustainability  CO4: Maintenance of plant material																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5																										
CO-1																															
CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Unit – I 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.</p> <p>Unit – II 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.</p>																														

## Master of Architecture [Landscape Architecture]

	<p>Unit – III 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, erbal plants and their uses.</p> <p>Unit – IV Plants and sustainability, Growth rate of plants as a criterion 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.</p> <p>Unit – V 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 quantities</p>
Reference Books	<ol style="list-style-type: none"> <li>1. Randhwa,M.S. (1957) Flowering Trees , New Delhi: Indian Council Of Agricultural Research.</li> <li>2. H, S. (1966) Common Trees –India, The Land And the People , New Delhi: National Book Trust.</li> <li>3. Bose,T.K., Chowdhury.B.and.Sharma,S.P. (2011) Tropical Garden Plants in Colour, New Delhi: Horticulture And Allied Publishers.</li> <li>4. M., L.a.G.H. (1964) Taxonomy of Vascular Plants, New york: Oxford.P, M. (2008) Trees of India (WWF Natures Guide), London: Oxford; Edition edition.</li> <li>5. Raunkier.C (1934) The Life forms of Plants and statistical Plant Geography, London: Oxford At The Clarendon Press.S, R.M. (1971) Flowering trees (India-The land and people), New Delhi: National Book Trust.</li> <li>6. S.G, N. (2004) Forest Trees of South India , Bengaluru: Navabharath Press</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>

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## Master of Architecture [Landscape Architecture]

Course Code	MLA23																														
Course Title	theory of Landscape Architecture – II																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an understanding of contemporary landscapes and as to how environmental issues and ecological issues have been resolved in them; and understanding regional scale of landscape architecture and its allied aspects																														
Course Outcomes	CO1: Garden design  CO2: growth and development of landscape  CO3: multi functional landscape  CO4: urban landscape																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-4</td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-1																															
CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Garden design, growth and development of landscape , multi functional landscape and urban landscape</p> <p>Unit – I Modern garden design and innovations in landscape architecture; The contemporary history of the profession with study of theory and works of Andrew Jackson Downing, Frederick Law Olmsted, Ian McHarg, Thomas Church, Lawrence Halprin, Burle Marx to present day significant designers.</p> <p>Unit – II Growth and development of Landscape as a profession: Professional education, the environmental movement, large scale regional planning, significant landscape architectural projects of the past century.</p> <p><b>Unit – III Landscape and cities: rural settlements and civic transformations; landscape fragmentation, sensitivity and change.</b></p>																														

Master of Architecture [Landscape Architecture]

	<p><b>Unit IV Multifunctional landscape, Continuous Productive Urban Landscape - urban agriculture for sustainable cities</b></p> <p><b>Unit –V Market gardens; Landscape as a historic preservation resource; Green pilgrimage network, Sacredlandscape and Historic Urban Landscape</b></p>
Reference Books	<ol style="list-style-type: none"> <li>1. Andre Viljone, K.B.J.H. (2005) Continuous Productive Urban Landscapes: Designing Urban Agriculture for Sustainability, Elsevier- Architectural Press.</li> <li>2. Du, G.W.a.B.S. (2016) Mohammad Shaheer NOTES : A selection of Articles published in LA, Journal of Landscape Architecture, A special edition.</li> <li>3. McHarg, I.L. (1995) Design with Nature , Wiley.</li> <li>4. National ParkService Conference. (1999) Preserving Modern Landscape Architecture, Spacemaker press</li> <li>5. Newton, N.T. (n.d) Design on the Land: The Development of Landscape Architecture .</li> <li>6. Spens,M(1996)Landscape Transformed, Academy Edition.</li> <li>7. Modern Landscape Architecture: a CriticalReview , MIT press.</li> <li>8. Moore, C. (n.d) Poetics of Garden .</li> <li>9. Shaheer, M. (2013) Landscape Architecture in India : A Reader, LA Journal of Landscape Architecture.</li> <li>10. Singh, M.J.a.I. (2017) Landscape Architecture: History, Ecology and Patterns, copal publication</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>

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Master of Architecture [Landscape Architecture]

Course Code	MLA24																														
Course Title	Site Planning and Landscape Engineering - II																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop an advanced understanding of a site and the surroundings, with a whole-to-part approach on a holistic basis. Students must examine the natural, cultural, and social systems that affect design decisions, as well as the language and literature of landscape architecture. Studies to be undertaken on land development planning to appraise students in environmental, economic, legal, and visual issues associated with land planning process																														
Course Outcomes	<p>CO1: Components of Landscape Engineering</p> <p>CO2: Site mobilisation; Sequence of site activity, site protection measures, site implementation checklist. Landscape Engineering and water conservation</p> <p>CO3: Understanding Land/environmental modifications and engineering intervention</p> <p>CO4: Environment-friendly material specifications and methodologies in landscape</p>																														
Mapping between COs with PSOs	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-3</td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p><b>Components of Landscape Engineering, Site mobilisation, Soil conservation and erosion control measures and Estimation of costs for civil works and plantation works</b></p> <p>Unit – I Components of Landscape Engineering and their consideration in Site Planning and Landscape design. Appraisal of site factors in</p>																														

Master of Architecture [Landscape Architecture]

	<p>large scale developments with above correlation. Use of relevant software and advanced mapping technology for analysis.</p> <p>Unit – II 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.</p> <p><b>Unit – III Understanding Land/environmental modifications and engineering intervention</b> 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.</p> <p>Unit – IV <b>Environment-friendly material specifications and methodologies in landscape</b>, 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.</p> <p>Unit – V Estimation of costs for civil works and plantation works. Preparation of bill of quantities, specifications and Tender documents</p>
Reference Books	<ol style="list-style-type: none"> <li>1. ines, C.W.H.N.T. (2001) Time saver Standards for Landscape Architecture, Mc. Graw Hill.</li> <li>2. Hack, K.L.a.G. (1984) Site Planning , MIT PRESS.</li> <li>3. Hamid, S. (1985) Urban Design Process , Van Nostrand Reinhold.</li> <li>4. Hopper (n.d) Landscape Architectural Graphic Standards Student Ed., John Wiley and Sons Inc.</li> <li>5. Ingels, J.E. (1992) Landscaping – Principles &amp; Practices , Pelmer Publishers Inc.</li> <li>6. Lovejoy, D. ( 1973) Land use and Landscape Planning, Barnes &amp; Noble.</li> <li>7. Lynch, K. (1994) A Good City Form , MIT PRESS.</li> <li>8. Mukoda, N. (1990) Street furniture, Bijutsushuppan – sha Ltd.</li> <li>9. Niall, K.a. (n.d) The Art of Landscape Detail: Fundamentals, Practices and Case Studies.</li> <li>10. Reid, G.W. (1987) Landscape Graphics, Watson , New York: Guptill publication</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment

Master of Architecture [Landscape Architecture]

Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/Jury)
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*Almohli*



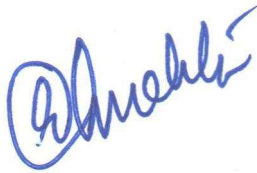
# Master of Architecture [Landscape Architecture]

Course Code: MLA25      Course title: Urban Governance

Course Code	MLA25																														
Course Title	Urban Governance																														
Credit	3																														
Teaching per Week	3 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Exposure to the Urban governance																														
Course Outcomes	<p>CO1: Overview of Urban Governance</p> <p>CO2: Legislations pertaining to Urban Governance</p> <p>CO3: Institutions and Organizations</p> <p>CO4: Urban Local Governance and Participatory Processes System,</p>																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-1																															
CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p><b>Unit 1: Overview of Urban Governance</b> Definition, concepts, components, government and governance, hierarchy and structure, forms of governance, process of inclusion and exclusion,</p> <p>Unit e 2: <b>Legislations pertaining to Urban Governance Institutional frame and mechanism for urban governance as envisaged in the 73rd and 74th Constitution Amendment Acts.</b></p> <p>Unit 3: Institutions and Organizations Differences between institutions and organizations; approaches to understanding organizations; types, structure and functions, their interface and conflicts, reach, and their</p>																														

Master of Architecture [Landscape Architecture]

	<p>effectiveness; Methods, process and evaluation; Present organizations and involved in urban governance.</p> <p><b>Unit 4: Urban Local Governance and Participatory Processes</b> <b>System</b>, structure, functions, powers, process and resource, performance, interface with NGO's, other agencies. Stakeholders' participation, roles and responsibilities, access to government by various stakeholder</p>
Reference Books	NIL
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)



Master of Architecture [Landscape Architecture]

Course Code	MLA26																																		
Course Title	Geoinformatics for Landscape Architecture																																		
Credit	3																																		
Teaching per Week	3 Hours																																		
Minimum weeks per Semester	16																																		
Effective From	February 2020																																		
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																																		
Course Objective	To develop an understanding of the land and its designed modifications, with an integration of Earth sciences To develop understanding and capacity building to use information science in landscape architecture to address various problems of geography, cartography, geosciences and related branches of science and engineering in landscape design and planning																																		
Course Outcomes	<p>CO1: Concept and Foundation of Remote Sensing</p> <p>CO2: Introduction to Air Photo Interpretation</p> <p>CO3: Digital Image Processing</p> <p>CO4: Geographical Information Systems</p>																																		
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> </tbody> </table>						PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-1																																			
CO-2																																			
CO-3																																			
CO-4																																			
Pre-requisite	Basic Inclination towards Landscape Architecture																																		
Course Content	<p>Concept ,Foundation and application of Remote Sensing and GIS</p> <p><b>Unit – I Concept and Foundation of Remote Sensing</b>, Elements of Photographic System Types of Aerial Photographs:Vertical Photographs, Oblique Photographs, Satellite Imagery</p> <p><b>Unit – II Introduction to Air Photo Interpretation</b>, Photogrammetry for Map Making :Introduction /Definition, Geometric Elements of a Vertical Photograph, Relief Displacement, Ground Control for Aerial Photography</p> <p><b>Unit – III Digital Image Processing, Applications</b> : Geologic &amp; Soil mapping, Land-use / land cover Mapping a) Land use Classification, Agriculture Applications, Forestry Applications, Water resource</p>																																		

Master of Architecture [Landscape Architecture]

	<p>Applications: Water Pollution Detection, Flood Damage Estimation, Urban &amp; Regional Planning Applications, Wetland mapping</p> <p><b>Unit – IV Geographical Information Systems</b> :Definition, Composition of Geographical Information System, Computer Hardware Module, GIS Software Module, Data Input, Data Storage, Data Output, Database Structures</p> <p>Unit – V Presentations / Workshop Application of GIS &amp; Remote Sensing, Automated Mapping / Facility Management. (AM/FM), 3-D GIS Digital Elevation Model &amp; Digital Terrain Model, Digital Image Processing and Editing; Error Detection and Correction, Geo Spatial Analysis : Turning Data into Meaningful information. Comparison of Vector &amp; Raster Methods, Internal G.I.S., Network Analysis, Open GIS</p>
Reference Books	<ol style="list-style-type: none"> <li>1. Batty, D.M.a.M. (ed.) (2005) GIS, Spatial Analysis and Modeling, ESRI Press.</li> <li>2. Brewer, C.A. (n.d) Designing Better Maps: A Guide for GIS Users, ESRI Press.</li> <li>3. C, H.T. (n.d) Land Form Designs, P D A Publication.</li> <li>4. C.Hanna, K. (1999) GIS for Landscape Architects, ESRI press. 5. G.S.Srivastava (2014) An Introduction to Geoinformatics, McGraw Hill Education.</li> <li>6. Garcia, J. (2017) Introduction to Geographic Information System, Larsen and Keller Education. 7. H, P.P. (1995) Concrete Floors Finishes , Butterworth-Heinemann.</li> <li>8. K.R, B. (1990) Integrating GIS into Urban Regional Planning, Alternative approaches for developing countries regional development Dialogue , Japan: UNCRD.</li> <li>9. Michael, L. (1988) Tree Detailing , London: Butterworth Architecture.</li> <li>10. Michael, L. (1993) Landscape Detailing Vol.1 Enclosure , 3rd edition, Architectural Pres</li> </ol>
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	<p>40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc.</p> <p>60% External based on semester end University examination (Viva/ Jury)</p>

*Signature*



## Master of Architecture [Landscape Architecture]

Course Code	MLA31																														
Course Title	Landscape Architecture Studio - III																														
Credit	12																														
Teaching per Week	12 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	To develop the skill to integrate various knowledge systems to arrive at a design proposal of an urban scale, the process used for the same																														
Course Outcomes	<p>CO1: Institutional Campuses</p> <p>CO2: Urban civic spaces at urban design scale</p> <p>CO3: Transportation and interchange systems and complexes</p> <p>CO4: Eco-Tourism projects</p>																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <th>CO-1</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-2</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-3</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-4</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-1																															
CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p style="color: #e67e22;">Exercise related to the application of ecological principles in a range of situations directed towards understanding and proposing design possibilities in:</p> <p style="color: #27ae60;">Institutional Campuses</p> <p style="color: #27ae60;">Urban civic spaces at urban design scale</p>																														

Master of Architecture [Landscape Architecture]

	Transportation and interchange systems and complexes Eco-Tourism projects
Reference Books	1. C, H.T. (n.d) Land Form Designs , P D A Publication. 2. H, P.P. (n.d) Concrete Floors Finishes . 3. Michael, L. (1988) Tree Detailing, London: Butterworth Architecture. 4. Michael, L. (n.d) Landscape Detailing Vol.1 Enclosure. 5. Stevens, D. (n.d) Ultimate Water Garden Book
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)



Master of Architecture [Landscape Architecture]

Course Code	MLA32																														
Course Title	Landscape Project Management and Professional Practice																														
Credit	06																														
Teaching per Week	06 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Basic overview of Landscape Project Management and Professional Practice																														
Course Outcomes	<p>CO1: Regulations and Legal Aspects Codes, Standards, Bye laws and planning regulations</p> <p>CO2: Construction administration, Implementation process Sequence of activities from inception to completion</p> <p>CO3: Construction documents Contract Procedure; Criteria for selecting contractors</p> <p>CO4: Professional Practice Types of client: Private, Government, Corporate etc.</p>																														
Mapping between COs with PSOs	<table border="1"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> </tr> <tr> <td>CO-2</td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>(a) <b>Regulations and Legal Aspects Codes, Standards, Bye laws and planning regulations applicable to building and landscape development.</b> The role of statutory and regulatory bodies such as the Municipal Corporation, N.D.M.C, D.D.A and Urban Art commission etc.</p> <p>(b) <b>Construction administration</b> , 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</p>																														

Master of Architecture [Landscape Architecture]

	<p>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.</p> <p><b>(c) Construction documents Contract Procedure;</b> 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.</p> <p><b>(d) Professional Practice Types of client:</b> 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.</p>
Reference Books	NIL
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)

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Master of Architecture [Landscape Architecture]

Course Code	MLA33																														
Course Title	Geology & Edaphic parameters																														
Credit	06																														
Teaching per Week	06 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Overview of Geology & Edaphic parameters																														
Course Outcomes	CO1: Understanding origin and interior of the earth CO2: Understanding Structural geology CO3: Application of geological information in the interpretation of landscapes on maps and in the field CO4: The relationships between geology, soils and vegetation																														
Mapping between COs with PSOs	<table border="1"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>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.</p> <p>Minerals and Metals.Rocks: Igneous, Sedimentary, Metamorphic.Isostasy, plate tectonics, crustal deformation and mountain building.</p>																														

Master of Architecture [Landscape Architecture]

	<p><b>Structural geology:</b> dip, strike, folds, faults, joints, unconformities. Stratigraphy: principles, stratigraphy and geology of India.</p> <p><b>Application of geological information in the interpretation of landscapes on maps and in the field.</b></p> <p><b>The relationships between geology, soils and vegetation:</b> Practical examples. SOILS Genesis, morphology and classification of soils. Properties of Soils: Physical, Chemical, Biological and Mineralogical. Soil use and Management:</p> <p>(a) Soil evaluation and land-use planning.</p> <p>(b) Soil and water conservation.</p> <p>(c) Soil fertility and plant nutrition.</p> <p>(d) Soil degradation control, remedial actions and reclamation techniques. Managing difficult soils</p>
Reference Books	NIL
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)

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## Master of Architecture [Landscape Architecture]

Course Code	MLA34																														
Course Title	Ecology and Ecosystem Analysis																														
Credit	03																														
Teaching per Week	03 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Concept of Ecosystem: General Structure and Function:																														
Course Outcomes	CO1: Energy flow, Primary & Secondary Production CO2: Types of Biogeochemical cycles CO3: Analysis and evaluation CO4: Description and Evaluation Systems																														
Mapping between COs with PSOs	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <th>CO-1</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> </tr> <tr> <th>CO-2</th> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> <td></td> </tr> <tr> <th>CO-3</th> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> <tr> <th>CO-4</th> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-2																															
CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p>Evolution: Earth and Life</p> <p><b>Concept of Ecosystem: General Structure and Function:</b></p> <ul style="list-style-type: none"> <li>i) Energy flow, Primary &amp; Secondary Production</li> <li>ii) Types of Biogeochemical cycles; Carbon cycle, Global water cycles, nitrogen cycle bioaccumulation and biomagnifications and</li> <li>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</li> <li>iv) <b>Analysis,</b></li> </ul>																														

Master of Architecture [Landscape Architecture]

	v) Description and Evaluation Systems Ecology: <b>Introduction to systems approach and mathematical models in ecology Population Dynamics:</b> 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
Reference Books	NIL
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)



## Master of Architecture [Landscape Architecture]

Course Code	MLA35																														
Course Title	Landscape Economics Management and horticultural practice																														
Credit	03																														
Teaching per Week	03 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Overview of Landscape Economics Management and horticultural practice																														
Course Outcomes	CO1: Economics:  CO2: management  CO3: Horticulture Practice  CO4: Horticulture practice and maintenance																														
Mapping between COs with PSOs	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-3																															
CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p><b>Economics: Cost and benefits related to open space development;</b> 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 .<b>Management practices related to urban ecology and urban habitats</b>, such as urban forests, river banks, regional parks and green belts: ecological, economic and administrative issues. Management models.</p> <p><b>Horticulture Practice:</b> Nursery establishment and Plant propagation. Establishment and maintenance of grass, shrubs and trees with respect</p>																														

Master of Architecture [Landscape Architecture]

	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.
Reference Books	NIL
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)

*Almehdi*



Master of Architecture [Landscape Architecture]

Course Code	MLA36																		
Course Title	Landscape thesis																		
Credit	30																		
Teaching per Week	30 Hours																		
Minimum weeks per Semester	16																		
Effective From	February 2020																		
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																		
Course Objective	Student to work on the topic of his / her preference a built a Thesis																		
Course Outcomes	CO1: Theoretical Framework on the topic of his / her preference a built a thesis  CO2: Landscape intervention on the topic of his / her preference a built a Thesis																		
Mapping between COs with PSOs	<table border="1"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2					
	PSO-1	PSO-2	PSO-3	PSO-4	PSO-5														
CO-1																			
CO-2																			
Pre-requisite	Basic Inclination towards Landscape Architecture																		
Course Content	<p><b>Landscape Architecture thesis will consist of two parts:</b></p> <p><b>(a) Research oriented towards establishing a strong theoretical background for the chosen subject.</b></p> <p><b>(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.</b></p>																		
Reference Books	NIL																		

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Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/Jury)



## Master of Architecture [Landscape Architecture]

Course Code	MLA36																														
Course Title	Research Methodology																														
Credit	03																														
Teaching per Week	03 Hours																														
Minimum weeks per Semester	16																														
Effective From	February 2020																														
Purpose of Course	The purpose of the course is to make the student capable of implementing the concepts, methods, and tools of Landscape Architecture																														
Course Objective	Overview of Research Methodology in Landscape Architecture																														
Course Outcomes	<p>CO1: Defining the Research Problem and Research Design</p> <p>CO2: Sampling Design Census and sample survey</p> <p>CO3: Methods of Data Collection</p> <p>CO4: Data Analysis, Interpretation and Report Writing</p>																														
Mapping between COs with PSOs	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>PSO-1</th> <th>PSO-2</th> <th>PSO-3</th> <th>PSO-4</th> <th>PSO-5</th> </tr> </thead> <tbody> <tr> <td>CO-1</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-2</td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-3</td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td></td> <td></td> </tr> <tr> <td>CO-4</td> <td></td> <td></td> <td></td> <td style="background-color: #cccccc;"></td> <td style="background-color: #cccccc;"></td> </tr> </tbody> </table>		PSO-1	PSO-2	PSO-3	PSO-4	PSO-5	CO-1						CO-2						CO-3						CO-4					
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CO-4																															
Pre-requisite	Basic Inclination towards Landscape Architecture																														
Course Content	<p style="color: #e67e22;">UNIT I: Research Methodology: An Introduction Meaning of Research, Objective of Research, Motivation in Research, Types of Research, Research Approaches, Significance of Research, Research Methods versus Methodology, Research and Scientific Method, Importance of Knowing How Research is Done, Research Process, Criteria of Good Research, Problems Encountered by Researchers in India</p> <p style="color: #27ae60;">UNIT II: Defining the Research Problem and Research Design What is a Research Problem?, Selecting the Problem, Necessity of Defining the Problem, Meaning of Research Design, Need for Research Design, Future of a Good Design, Important Concepts Relating to Research</p>																														

Master of Architecture [Landscape Architecture]

	<p>Design, Different Research Design, Basic Principals of Experimental Designs</p> <p>UNIT III: Sampling Design Census and sample survey, Implications of a Sample Design, Steps in sampling Design, Criteria of Selecting a Sampling Procedure, Characteristics of a Good Sample Design, Different Types of ample Designs, How to Select a Random Sample?, Random Sample from an Infinite Universe, Complex Random Sampling Designs</p> <p>UNIT IV: Methods of Data Collection Collection of Primary Data, Observation Method, Interview Method, Collection of Data through Questionnaires, Collection of Data through Schedules, Difference between Questionnaires and Schedules, Some Other Methods of Data Collection, Collection of Secondary Data, Selection of Appropriate Method for Data Collection</p> <p>UNIT V:Data Analysis, Interpretation and Report Writing Data Analysis and Presentation Editing and coding of data, tabulation, graphic presentation of data, cross tabulation, Testing of hypotheses; type I and II errors, one tailed and two tailed tests of significance, Parametric and nonparametric tests for Univariate and Bivariate data. Tests of association; simple linear regression and other nonparametric tests, Meaning of Interpretation, Why Interpretation? Technique of Interpretation, Significance of Report Writing, <b>Deferent Steps in Writing Report. Layout of the Research Report, Types of Report, Oral Presentation, Mechanics of Writing a Research Report, Precautions for Writing a Research Reports</b></p>
Reference Books	Research Methodology – C R Kothari
Teaching Methodology	Studio-work, Discussion, Self-Study, Seminars and/or Assignment
Evaluation Method	40% Internal assessment based on class attendance, participation, class test, quiz, assignment, seminar, internal examination, etc. 60% External based on semester end University examination (Viva/ Jury)

