



RAMAIAH
Institute of Technology

CURRICULUM

for the Academic year 2020 – 2021

SCHOOL OF ARCHITECTURE

III & IV Semester M.ARCH (LANDSCAPE ARCHITECTURE)

RAMAIAH INSTITUTE OF TECHNOLOGY
(Autonomous Institute, Affiliated to VTU)
Bangalore – 560054.

About the Institute:

Dr. M. S. Ramaiah a philanthropist, founded 'Gokula Education Foundation' in 1962 with an objective of serving the society. M S Ramaiah Institute of Technology (MSRIT) was established under the aegis of this foundation in the same year, creating a landmark in technical education in India. MSRIT offers 13 UG programs and 15 PG programs. All these programs are approved by AICTE. All the UG programs & 09 PG programs are accredited by National Board of Accreditation (NBA). The institute is accredited with 'A' grade by NAAC in 2014. University Grants Commission (UGC) & Visvesvaraya Technological University (VTU) have conferred Autonomous Status to MSRIT for both UG and PG Programs till the year 2029. The institute is a participant to the Technical Education Quality Improvement Program (TEQIP), an initiative of the Government of India. The institute has 380 competent faculty out of which 60% are doctorates. Some of the distinguished features of MSRIT are: State of the art laboratories, individual computing facility to all faculty members, all research departments active with sponsored funded projects and more than 300 scholars pursuing Ph.D. To promote research culture, the institute has established Centre of Excellence for Imaging Technologies, Centre for Advanced Materials Technology & Schneider Centre of Excellence. **M S Ramaiah Institute of Technology has obtained "Scimago Institutions Rankings" All India Rank 65 & world ranking 578 for the year 2020.**

The Centre for Advanced Training and Continuing Education (CATCE), and Entrepreneurship Development Cell (EDC) have been set up on campus to incubate startups. **M S Ramaiah Institute of Technology secured All India Rank 8th for the year 2020 for Atal Ranking of Institutions on Innovation Achievements (ARIIA), an initiative of Ministry of Human Resource Development (MHRD), Govt. of India.** MSRIT has a strong Placement and Training department with a committed team, a good Mentoring/Proctorial system, a fully equipped Sports department, large air-conditioned library with good collection of book volumes and subscription to International and National Journals. The Digital Library subscribes to online e-journals from Elsevier Science Direct, IEEE, Taylor & Francis, Springer Link, etc. MSRIT is a member of DELNET, CMTI and VTU E-Library Consortium. MSRIT has a modern auditorium and several hi-tech conference halls with video conferencing facilities. It has excellent hostel facilities for boys and girls. MSRIT Alumni have distinguished themselves by occupying high positions in India and abroad and are in touch with the institute through an active Alumni Association.

As per the National Institutional Ranking Framework, MHRD, Government of India, M S Ramaiah Institute of Technology has achieved 59th rank among 1071 top Engineering institutions of India for the year 2020 and 1st rank amongst Engineering colleges (VTU) in Karnataka.

SCHOOL OF ARCHITECTURE

Ramaiah Institute of Technology (RIT), Bangalore, is a leading institution offering undergraduate, post graduate and research programs in the areas of engineering, management and architecture. The institute was established in the year 1962 under the aegis of Gokula Education Foundation. Its mission is to deliver Global quality technical education by nurturing a conducive learning environment for better tomorrow through continuous improvement and customization.

The school of architecture, RIT, Bangalore, started in the year 1992. Since its establishment, the school has played a vital role in providing quality education. The Council of Architecture and AICTE has recognized this program.

The mission of the school is to uphold RIT mission and thus provide quality education to the students and mould them to be excellent Architects with adequate management skills and noble human qualities.

Full time faculty members having postgraduate qualification from prestigious institutions in India and abroad are teaching in this school. Experienced and well respected practicing architects are invited to provide their experiences as visiting faculty. New milestones are continually being set and achieved. The synergy of the progressive management, committed faculty and students are ensuring in excellent academic results year after year. This is reflected in the high number of University ranks that are secured.

The School of Architecture is now autonomous (affiliated to VTU) providing scope for further improvement. The focus has been towards fostering novel concepts and solutions in architectural design. The student's response is very encouraging and the school recognizes and appreciates such good students by awarding them. Many of the students after graduation have pursued higher studies in various universities in the country and abroad. There is a good demand for the school graduates in the industry and is developing initiatives towards co-branding of the industry and the institution school. Many have started their own enterprise and architectural practice as well.

All this has been possible as a result of the efforts of the impeccable faculty of the school. The faculty is committed to the welfare and success of the students. The teachers of the school are also engaged in enhancing their knowledge and skills and many are engaged in research activities as well. The school has experts in specialized disciplines like Planning, Landscape Architecture and Interior Design. Faculties of the school also actively participate in National and International conferences and publish and present papers.

The school as part of consultancy started off with the maiden project to redevelop the RIT engineering college campus and is now involved in various campus designs.

The school is proud to have started the M. Arch programme in Landscape Architecture. This was started in the year 2011. The Master of Landscape Architecture is a 2year full time postgraduate programme. The prescribed course is two years of full-time study.

The course consists of areas of study ranging from community-scale landscape planning to the details of landscape construction technology, with an emphasis on sustainable practices in landscape architecture. The course covers a broad spectrum of topics from local to regional scale. Balancing theory with hands-on practice, design aspects of landscape architecture is given equal prominence to direct the students towards a holistic approach to Sustainable Landscape Architecture. The course is structured to analyze and respond to critical issues facing contemporary landscape architectural design and development. Thus the students have the opportunity to explore alternative, innovative, and experimental design.

The course will enable design and construction professionals to enhance their understanding of the integral relationship between natural processes and human activity, and how sustainable design fits into everyday life, explore design options to address the same and examine policies, regulations, and standards in industry and government for implementation of the principles of sustainable design.

VISION OF THE INSTITUTE

To be an Institution of International Eminence, renowned for imparting quality technical education, cutting edge research and innovation to meet global socio-economic needs

MISSION OF THE INSTITUTE

MSRIT shall meet the global socio-economic needs through

- Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization
- Establishing research clusters in emerging areas in collaboration with globally reputed organizations
- Establishing innovative skills development, techno-entrepreneurial activities and consultancy for socio-economic needs

QUALITY POLICY

We at Ramaiah Institute of Technology strive to deliver comprehensive, continually enhanced, global quality technical and management education through an established Quality Management System complemented by the synergistic interaction of the stakeholders concerned

VISION OF THE DEPARTMENT

To achieve and propagate high standards of excellence in architectural education

MISSION OF THE DEPARTMENT

- The school's commitment is to prepare people to make a difference;
- To create an environment that shall foster the growth of intellectually capable, innovative and entrepreneurial professionals, who shall contribute to the growth of the society by adopting core values of learning exploration, rationality and enterprise; and
- To contribute effectively by developing a sustainable technical education system to meet the changing technological needs incorporating relevant social concerns and to build an environment to create and propagate innovative designs and technologies.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs):

PEO 1: Use the knowledge and skills of Architecture to analyze the real life problems and interpret the results.

PEO 2: Effectively design, implement, improve and manage the integrated socio-technical systems.

PEO 3: Build and lead cross-functional teams, upholding the professional responsibilities and ethical values.

PEO 4: Engage in continuing education and life-long learning to be competitive and enterprising.

PROGRAM OUTCOMES (POs):

PO1: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO2: Design/development of solutions: Design solutions for complex Landscape design problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO3: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO4: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO5: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs):

- a. Design and develop projects based on function, form and analysis.
- b. Design and improve integrated systems of people, materials, information, facilities, and technology.
- c. Identify, formulate and solve industrial requirements and problems.
- d. Understand the impact of design solutions in a global and social context.

BOARD OF STUDIES FOR THE TERM 2020 - 2021

1.	Prof. (Dr.) Pushpa Devanathan	Chairperson
2.	Ar. Chitra Vishwanath	VTU Nominee
3.	Ar. Vidyadhar S. Wodeyar	External Industry Expert
4.	Ar. Prasad G	External Industry Expert
5.	Dr. Rama RS	Academician
6.	Dr. Chidambara Swamy	Academician
7.	Ar. Subbiah T S	Alumni Industry Expert
8.	Prof. Vishwas Hittalmani	Member
9.	Prof. (Dr.) Rajshekhar Rao	Member
10.	Dr. Rashmi Niranjana	Member
11.	Ar. Meghana K Raj	Member
12.	Ar. Reema H Gupta	Member
13.	Er. Vijayanand M	Member

SCHOOL OF ARCHITECTURE

TEACHING STAFF

SI No	Name	Qualification	Designation
1	Prof. (Dr.) Pushpa Devanathan	M.Arch., P.G.D.I.(PhD)	Professor & HOD
2	Prof. (Dr.) Rajshekhar Rao	M L Arch (PhD)	Professor & Head - M.Arch (Landscape Architecture)
3	Ar. Surekha R	M L Arch	Associate Professor
4	Ar. (Dr.) Lavanya Vikram	M L Arch (PhD)	Associate Professor
5	Ar. Meghana K Raj	M L Arch	Associate Professor
6	Ar. Tejaswini H	M L Arch	Associate Professor
7	Ar. Prasad.G	M L Arch	Professor (Tenure)
8	Ar. Sudhir Chougule	M L Arch	Associate Professor (Tenure)
9	Ar. Mallika P V	M L Arch	Associate Professor (Tenure)
10	Ar. Ranjitha Govindaraj	M L Arch	Assistant Professor
11	Ar. Arpita Sarkar	M L Arch	Assistant Professor
12	Ar. Jyotsna Rao	M L Arch	Assistant Professor
13	Ar. Sheethal B S	M. Plan	Assistant Professor
14	Dr. Raghavendra	M Sc. PhD	Allied Faculty
15	Mr. Manjunath R	M.Tech	Allied Faculty
16	Mrs. Shilpa	M.Tech	Allied Faculty
17	Ar. Nina Chandavarkar	MS L Arch	Visiting Professor
18	Ar. Bijoy Chacko	M L Arch	Visiting Professor
19	Ar. Deepthi C B	M L Arch	Visiting Faculty

ADMINISTRATIVE STAFF

1	Mr. Nagesh B.L	Dip. in Mech. Engg.	Instructor
2	Mrs. Ambika. B	M Tech	Assistant Instructor
3	Ms. Swathi. P	B.com	SDA

SUPPORT STAFF

1	Mr. Ramachandra Chari	Attender
2	Mrs. Varalakshmi	Attender

RAMAIAH INSTITUTE OF TECHNOLOGY BANGALORE
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SCHEME OF TEACHING & EXAMINATION – M ARCH
(LANDSCAPE ARCHITECTURE)
ACADEMIC YEAR 2020- 2021
III SEMESTER – 2019 BATCH

Code	Subject (2019 Batch)	Credits	Total	Examination	CIE Marks	SEE Marks
LA301	Landscape Design III (Regional landscape)	8:0:1	9	SEE (Viva voce)	50	50
LA302	Planting Design -II	3:0:0	3	SEE	50	50
LA303	Remote sensing & GIS	2:0:0	2	CIE	100	
LA304	Environmental Impact Assessment	2:0:0	2	SEE	50	50
LA305	Landscape Resources & Management - II	3:0:0	3	SEE	50	50
LA306	Elective	2:0:0	2	SEE (Viva voce)	50	50
LA307	Practical Training / Vacation Assignment	0:0:3	3	SEE (Viva voce)	100	
LA 308	Landscape Documentation	1:0:0	1	CIE	100	
	Total		25			

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject	Design	Drawing	Viva Voice /Book Review
LA301	Landscape Design III (Regional landscape)	20	20	10

Subject Code	Subject Name	Portfolio	Assignment
LA303	Remote sensing & GIS	60	40

Subject Code	Subject Name	Design	Drawing	Viva Voce
LA306	Elective	25	15	10

Subject Code	Subject Name	Portfolio	Critical Appraisal	Material Analysis	Viva Voce
LA307	Practical Training / Vacation Assignment	50	20	10	20

Subject Code	Subject Name	Portfolio	Critical Appraisal	Analysis	Viva Voce
LA308	Landscape Documentation	50	20	10	20

Note:

- Literature survey will be a requirement for Landscape design study. Periodical review by an external jury for subjects going for viva voce.
- National/International tours may be arranged during vacation to students, to study good examples of Landscape Architecture.
- For all viva voce examinations one internal faculty and one external faculty will conduct the exam.
- Portfolios have to be submitted on prescribed date for all subjects on the date announced by the department for one year
- All students have to register on the first day at the beginning of the **Viva Voce exam**.
- All students have to register on the first day of **Term work exams**.

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SCHEME OF TEACHING & EXAMINATION – M ARCH
(LANDSCAPE ARCHITECTURE)
ACADEMIC YEAR 2020- 2021

IV SEMESTER – 2019 BATCH

Code	Subject	Credits	Total	Examination	CIE Marks	SEE Marks
LA401	Landscape Architecture Thesis	16:0:0	16	SEE (Viva voce)	50	50
LA402	Landscape Conservation	3:0:0	3	SEE	50	50
LA403	Legal Aspects & Environmental Legislation	3:0:0	3	SEE	50	50
LA404	Professional Practice & Landscape Maintenance	3:0:0	3	SEE	50	50
	Total		25			

CIE = CONTINUOUS INTERNAL EVALUATION

SEE = SEMESTER END EXAMINATION

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Design	Drawing	Viva Voce
LA401	Landscape Architecture Thesis	25	15	10

Note:

- Literature survey will be a requirement for Landscape design study. Periodical review by an external jury for subjects going for viva voce.
- National/International tours may be arranged during vacation to students, to study good examples of Landscape Architecture.
- For all viva voce examinations one internal faculty and one external faculty will conduct the exam.
- Portfolios have to be submitted on prescribed date for all subjects on the date announced by the department for one year
- All students have to register on the first day at the beginning of the Viva Voce exam.
- All students have to register on the first day of Term work exams.

SEMESTER –III

LANDSCAPE DESIGN III (Regional landscape)

Course Code: LA301

Credits: 8:0:1

Prerequisite: Nil

Course Coordinator: Prof. Rajshekhar Rao

Course objectives:

- To develop the skill in students to investigate and record interdisciplinary regional scale projects integrating characteristics of soils, slopes, natural drainage systems, native plants communities, and wildlife habitat systems.

Course contents:

UNIT –I

The studio exercises will involve regional context, conservation, specialized landscape situations, ecology and the region. Understanding of ecologically sustainable development would be the underlying theme.

UNIT –II

The exercise includes documentation, to illustrate the process of understanding through study, in depth analysis of all the major issues, present status, scheme and policy decisions. Due importance to be given for the entire process that happens in site, studio and reviews.

UNIT –III

It can include a large area in a regional scale with strong justification with reference to conservation, ecological problems, environmental issues etc.

The studio shall begin with documentation and understanding the process followed in each of schemes. Documentation shall be intensive exercises with small groups who will identify the project and illustrate the entire process of design as well review the present status of the project and realization of stated objectives.

UNIT –IV

The main studio project shall be chosen in an area which is undergoing rapid changes triggered by an identifiable event or policy. The studio shall debate the needs of conserving the overall character of the chosen area with an in depth analysis on the social- cultural issues. Design of the proposed built element shall be preceded by a comprehensive scheme which shall be detailed.

UNIT –V

Projects like; tourism development; conservation of natural and built heritage; intervention in an urban area which has not been able to maintain its cultural moorings due to market forces shall be attempted.

Preliminary work on thesis project is to be done.

Course outcomes (COs):

CO1: To investigate and record the information available for analyzing natural and cultural processes that influence landscape planning and design. (PO1, PO2, PO4)

CO2: Adapt techniques and approach to organize and presenting environmental themes. (PO1, PO4)

CO3: To understand the parameters that guide planning and design decision making. (PO1, PO3)

CO4: To understand and analyze the socio-cultural issues. (PO1)

CO5: To understand and maintain the cultural significance in urban scenario. (PO1)

References:

1. Silent Spring- Rachael Carson
2. Small is Beautiful -EF Schumacher
3. Introduction to Landscape Design- John L. Motloch
4. Cities- Lawrence Halprin
5. The Wonder that was India- AL Basham
6. Regional Landscape Architecture: Southern California: Mediterranean Modern- Jeffrey Head
7. Beatrix Farrand's American Landscapes: Her Gardens and Campuses- Diana Balmori, Diane Kostial-Maguire, Elanor M. McPeck
8. Detailing for Landscape Architects: Aesthetics, Function, Constructability - John Wiley & Sons, Hoboken, NJ

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject	Design	Drawing	Viva Voice / Book Review
LA301	Landscape Design III (Regional landscape)	20	20	10

SEMESTER - III

PLANTING DESIGN – II

Course Code: LA 302

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Associate Prof. Meghana K Raj

Course Objectives:

- Introduce the students to the technical representation of softscape and hardscape in Landscape Architecture.
- Introduce them to the methods of bill of quantities for the plant materials in Landscape Design.
- Introduce them to different ecosystems their significant issues and suggestive plantation.
- Introduce them to softscape maintenance and management.

Course contents:

UNIT –I

Introduction to soft landscape working drawings, planting concepts, planting plans, plants schedule, specifications, estimation and bills of quantity of plant materials. Design exercises oriented towards the use of plant material in specific situation such as courtyards, small open spaces.

UNIT –II

The general design principles: application in planting design, case studies. Maintenance and management of plant material.

UNIT –III

Designing the natural landscape - interrelation of plants and environment [Site components, Biological and cultural] Role of plants against drought, flood etc. Influence of temperature, humidity and rainfall over plants. Windbreaks, shelter belts, erosion control, wildlife, land rehabilitation, land reclamation - plant materials for high water table.

UNIT –IV

Process of planting and transplanting of Trees. Soil preparation, Garden design and Selection of plant material.

UNIT –V

Green building Environment and landscape. Vertical garden, Terrace gardening, organic composting, organic gardening, soil less culture.

Course Outcomes (COs):

- CO1:** Gain the knowledge of technical representation of softscape and hardscape in Landscape Architecture. Identify the methods of bill of quantities for the plant materials in Landscape design. (PO1, PO2, PSO)
- CO2:** Understand the technique of maintenance and management of planting material. (PO1)
- CO3:** To understand the interrelation of plants and environment. Identify them to different ecosystem and their significant issues. (PO2, PO3)
- CO4:** Understand the planting procedure and considerations in tree transplantation. (PO1)
- CO5:** The awareness, knowledge and implementation of sustainable planning and design techniques. (PO1,PO4)

References:

1. Residential Landscaping 1: Planning, Design, Construction - Walker, Theodore D.
2. Plants for Reclamation of Wasteland ICAR Publication
3. Plants & Environment - Daubenmire.
4. The Planting Design Handbook 2nd Edition -Nick Robinson
5. Landscape Graphics: Plan, Section, and Perspective Drawing of Landscape Spaces- Grant Reid
6. The Vertical Garden from Nature to the City - Patrick Blanc
7. Constructed Wetlands and Sustainable Development - Gary Austin, Kong jian Yu
8. Treatment Wetlands 2nd Edition - Robert H. Kadlec, Scott Wallace
9. The Organic Farming Manual: A Comprehensive Guide to Starting and Running a Certified Organic Farm – Ann Larkin Hansen

SEMESTER III

REMOTE SENSING AND GIS

Course Code: LA 303

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Asst. Prof. Arpita Sarkar

Course Objectives:

- Objective of the course is to train the students in the application of GIS in landscape design.

Course Contents:

UNIT I

Concept and Foundation of Remote Sensing - Elements of Photographic System Types of Aerial Photographs: Vertical Photographs, Oblique Photographs, Satellite Imagery - Classification of Spatial and non-spatial data - spatial relationships among elements / activities – fundamentals of topological relationship - spatial data and their representation in maps - raster and vector based system to representing spatial objects

UNIT II

Objective and functions Geographical Information System – GIS software in general - over view of GIS map components.

Google Earth – site marking – KML files- exposure to other data sources – Bhuvan. nrc - USGS earth explorer, etc.

UNIT III

Basics of GIS maps preparation – digitization of spatial data - concept of point, line and polygon features - fundamental of coordinate system – map layers and georeferencing – displaying spatial features – adding attribute values to the features – preparing and displaying thematic layers and maps - selecting and editing spatial features and attribute data - preparing Grid surfaces form point, line and polygon features.

UNIT IV

SPATIAL ANALYSIS USING GIS

Spatial joining - concept of geo processing – union, intersect, clip and merge – features to raster - preparing surfaces - creating TIN surfaces and contours - surface analysis – spatial joining of geographic features.

UNIT V

Overlaying features and analyzing using overlay function – feature selection – buffering – table joining and analysis - manipulating attribute data – classification and reclassifications - GIS modelling – 3-D GIS Digital Elevation Model & Digital Terrain Model - Case problem on landscape analysis – application of GIS in assessing Landscape Ecological risks.

Course Outcomes (COs):

CO1: To expand understanding and use of social and environmental systems information in the design and planning process (PO1, PO2)

CO2: To increase the knowledge on GIS and the various characteristics of Data. (PO1)

CO3: Techniques of Map preparation and analysis using maps. (PO2, PO3, PO4, PO5)

CO4: Understand the concept of GIS and its applications (PO3, PO5)

CO5: Understand the potential of GIS and develop integrated practice of using the GIS application with landscape architecture. (PO5)

References:

1. Introduction to G.I.S – Kang Tsung Chang
2. Remote Sensing and Image Interpretation –Thomos M Lillisand, Ralph W
3. Fundamentals of Remote Sensing – George Joseph
4. Principles of G.I.S – Peter A Burrough, Rachael A McDonnel
5. Spatial Analysis and G.I.S – Michael F Goodchild

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Portfolio	Assignment
LA303	Remote sensing & GIS	60	40

SEMESTER III

ENVIRONMENTAL IMPACT ASSESSMENT

Course Code: LA 304

Credits: 2:0:0

Prerequisite: Nil

Course Coordinator: Associate Prof. Surekha R

Course Objectives:

- Understanding of environmental issues and suggestive measures
- Introduction to techniques of environmental management
- Introduction to application of relevant legislations in landscape design
- Establishing links of environmental management and landscape architecture

Course contents:

Unit-I

Introduction to environmental management; concepts of ecosystem; ethics and environment; environmental management tools. Environmental movements in the world. Environmental pollution and environmental concerns in India. Impact of human settlements, industries, dams, national parks, etc. on environment. Evolution of EIA across the world and India.

Unit-II

Environmental Impact Assessment - Definitions, purpose, steps, hierarchy, impact indicators and forecasting environmental changes. Strategic environmental assessment (SEA): Rationale and scope, process, benefits and constraints. Environmental clearance procedure in India.

Unit-III

EIA documentation and processes: Stages; impact prediction, evaluation, and mitigation; impact on decisions; public participation; requisites and review of EIS.

Unit-IV

Environmental management plan – strategies, approaches of environmental protection. Environmental monitoring. Environmental auditing: Objectives and scope, types, methodology.

Unit-V

EIA notifications by MoEF CC. Environmental and town planning legislations dictating the EIA procedures: (Air act; Water act, EPA act). Role of a landscape architect in EIA.

Course Outcomes (COs):

- CO1:** Understand the evolution of environmental impact assessment and appreciate the importance and need for environmental impact assessment. (PO4)
- CO2:** Skilled in review and appraisal of the EIA process and its outputs specific topic areas. Explain the major principles and steps involved in environmental impact assessment. Develop an understanding of the role of SEA & EIA in decision making. (PO4, PO5)
- CO3:** Select methodology for identification of environmental impacts, environmental indices and indicators. Apply the skill and knowledge of predicting impact of proposed project. (PO1, PO4)
- CO4:** Participate in interdisciplinary environmental report preparation. (PO4)
- CO5:** Gain an overview of the legislative framework for EIA, with a focus towards its application for policy development, project planning. (PO4, PO5)

References:

1. Our National Park Policy - John Ise
2. Parks and Recreational Needs in Urban area - Elinor C. Guggenheimer
3. Landscape Planning & Environmental Impact Design – Tom Turner
4. Environment Assessment Methodologies –Y. Anjaneyulu and Valli Manickam
5. Environmental Impact Analysis – R. K Jain et.al Van Nostrand
6. Environmental Impact Analysis –Larry. W. Canter
7. Guidelines for EIA of Developmental Projects, Ministry of Environment and Forests, GOI.

SEMESTER III

LANDSCAPE RESOURCES & MANAGEMENT – II

Course Code: LA 305

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Associate Prof. Lavanya V

Course Objectives:

- Introduce them to the values of biodiversity at the regional scale and various terminologies.
- Introduce ecosystem as a landscape resources, its importance and need for conservation.
- Environmental pollution and their mitigation techniques. Disaster management and their mitigation through landscape.

Course Contents:

UNIT I

Introduction to Bio Diversity, Values, environmental services to the planet. Bio Diversity of India, Bio Diversity hotspots, threats and conservation.

UNIT II

Introduction to ecosystem, desert, marine, estuary and aquatic. Threats and conservation measures of these ecosystems with case studies

UNIT III

Environmental pollution: Classification, types, causes, threats and mitigation methods- Air pollution, Water pollution, Sound pollution, Soil pollution, Radioactive pollution. Case studies from India and the world.

UNIT IV

Solid waste Management- Classification, methods, benefit, government measure.

UNIT V

Disaster Management- Landslides, Earthquake, floods. Causes, and mitigation process through landscape.

Course Outcomes (COs):

CO1: Develop fundamental knowledge of Bio Diversity. (PO1, PO2)

CO2: Study of different ecosystems and their conservation. (PO1, PO2)

CO3: Understand the different types of environmental pollution and mitigation techniques (PO3, PO4, PSO)

CO4: Study the importance of Solid waste management. (PO4, PO5)

CO5: Identify the different natural disasters and study the mitigation of these through landscape. (PO3, PO5)

References:

1. Project Management for the Design Professional - Burstein
2. Environmental Management – T.V Ramchandra
3. Landscape Ecology & Resource Management - John A. Bissonette, Ilse Storch
4. Urban Ecology: the science of cities- Richard Forman
5. A place in a shade - Charles Correa
6. Great Streets - Allan Jacobs
7. Civilizing American Cities: Writings on City Landscapes - Frederick Law Olmsted
8. The Death and Life of Great American Cities - Jane Jacobs

SEMESTER III

ELECTIVE

Course Code: LA 306

Credits: 2:0:0

Prerequisite: Nil

Course Coordinator: Prof. Rajshekhar Rao

Course Objectives:

- To Understand the Various Aspects of Landscape Architecture

Course Contents:

Aim of this Elective course is to broaden the knowledge of the student so as to enable the student to deal more effectively with various aspects of landscape architecture. Topics pertaining to environmental, ecological or other important issues in the field of landscape architecture like, Sacred landscape, Modern landscape, Eco- architecture, lake as water resource, Interior landscape design, Cultural landscape. Water as element in landscape, Manmade landscape etc.

Course Outcomes (COs):

CO1: To analyze the different aspects in landscape Architecture (PO1, PSO1)

CO2: To apply the principles of landscape architecture (PO2)

CO3: To select the topics for the Thesis Project (PO1)

CO4: Ability to plan and write a report /assignment (PO3, PO5)

CO5: Ability to substantiate critical reading of literature study. (PO4)

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Design	Drawing	Viva Voce
LA306	Elective	25	15	10

SEMESTER III

PRACTICAL TRAINING AND VACATION ASSIGNMENT

Course Code: LA 307

Credits: 0:0:3

Prerequisite: Nil

Course Coordinator: Prof. Rajshekhar Rao

Duration of Assignment: 7 weeks between 2nd & 3rd Semester.

Course Objectives:

To provide exposure to the various dimensions of Landscape Architectural profession. The students are required to Study minimum two live Projects designed by landscape architects, Critical Analysis of the live projects designed by landscape architects.

Course Contents:

UNIT I

Study and critical analysis of completed live projects designed by the landscape architect. Understand how a Landscape office functions.

UNIT II

Preparation of working drawings, Irrigation drawing, Electrical drawings.

UNIT III

Prepare Planting plan, list of plant materials, BOQ, landscape elements, and documentation of projects through 3D views and photographs.

UNIT IV

Study various landscape materials and construction techniques used on site.

UNIT V

Through site visits gain practical knowledge, Exposure to Client-Architect relationship, Discussions with Contactor.

Course Outcomes (COs):

CO1: Understanding of the various types of projects and the process of designing.

CO2: Learn skill of producing detail drawings for construction on site.

CO3: Understanding of Designing and Detailing out of Landscape projects.

CO4: Exposure to Professional practice as per the demand of industry.

CO5: Demonstrate skills to start an independent Landscape practice.

Performance will be evaluated through Viva voce

The Viva voce marks will be awarded based on the following works:

- Documentation of the work done in the office
- Critical analysis report of two live projects
- Landscape material portfolio

Note: student should work under a Landscape Architect who is a registered architect from Council of Architecture and the registered architect should sign in the certificate with registration number.

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Portfolio	Critical Appraisal	Material Analysis	Viva Voce
LA307	Practical Training / Vacation Assignment	50	20	10	20

SEMESTER – III

LANDSCAPE DOCUMENTATION

Course Code: LA308

Prerequisite: Nil Contact

Course Coordinator: Prof. Rajshekhar Rao

**Credits: 1:0:0
hours: 42 hours**

Course Objectives:

- To Understand the Value of Landscape documentation and procedure involved in landscape documentation.

Course Contents:

UNIT I

Introduction to landscape documentation: definition, Objectives, Importance of documentation

UNIT II

Validation of a site

UNIT III

Methodology and techniques of Documentation

UNIT IV

Analysis of given data and formulating policies.

UNIT V

Apply the knowledge gained and document a landscape site.

Course Outcomes (COs):

CO1: Gain knowledge about landscape documentation (PO1)

CO2: Be able to validate a given site (PO1, PO2)

CO3: Learn various techniques of documentation (PO3)

CO4: Learn the need and art of Policy making (PO4, PSO b)

CO5: Field work. (PO4, PO5, PSOa)

References:

Landscape Architecture Documentation standards – Principles, guidelines and Best Practices by Wiley

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Portfolio	Critical Appraisal	Analysiss	Viva Voce
LA308	Landscape Documentation	50	20	10	20

SEMESTER –IV

LANDSCAPE ARCHITECTURE THESIS

Course Code: LA 401

Credits: 16:0:0

Prerequisite: Nil

Course Coordinator: Prof. Rajshekhar Rao

Course objectives:

- To provide the students an opportunity towards application of the knowledge gained in an independent Thesis, with a design or a research focus, to arrive at a creative/ thoughtful design or findings, enriching the landscape architecture database.

Course contents:

UNIT-I

To provide an opportunity to prepare independent and original study at local or regional level. The study should be research based related to Urban or regional landscape issue.

UNIT-II

To provide an opportunity to prepare independent and original study at local or regional level pertaining to landscape architecture. To create a brief which sets the frame work for design.

UNIT-III

To demonstrate an advanced level of design ability to convert the brief set forth earlier into a speculative proposition of design.

UNIT-IV

To articulate and delineate the proposition of design into a Landscape design solution addressing all the dimensions.

UNIT-V

Alternatively, the Thesis could be a research topic based on the accepted norms of research methods. The Thesis can either be a scholarly research on an issue (or set of issues) which has a bearing on Urban or regional issues or a project with a clearly demonstrated design development process. The project shall demonstrate competence in integrating various issues of social, formal and local concerns into the design. 16

credits include the contact between the students and teachers. Each student is expected to spend additional time in the week on the Thesis in terms of library reference, site visits, designing, drawing, use of computers etc.

Course Outcomes (COs):

CO1: Assimilate a comprehensive understanding in handling a major Landscape Design independently. (PO3, PO4)

CO2: Understand Practical application of the knowledge acquired in various subjects studied during the course (PO2, PO5)

CO3: Analyze solutions for real life situations. (PO1, PO5)

CO4: Exhibit design, verbal and graphic skills through presentation of their work (PO1, PO2)

CO5: Learn to develop maps of the topography for Landscape planning and Site Management (PO5)

References:

1. Forest types -Vol1 and Vol 2 - Champion and Seth
2. Forest Ecology - G.S. Puri
3. Trees of Delhi - Pradeep Krishan
4. Research Methodology in Landscape Architecture - Nik Ismail Azlan
5. Landscape conservation - Brian Hackett
6. Earthscape - Simonds
7. Plants for Wasteland Reclamation - Sastry
8. Landscape and geomorphology - Agoudie
9. Jungle Trees of Central India - Pradip Krishen
10. Sacred scapes and Pilgrimage Systems - Rana P. B. Singh
11. Forestry in Karnataka - Deepak Sarmah

Evaluation Pattern: Marks allocation for SEE

Subject Code	Subject Name	Design	Drawin g	Viva Voce
LA401	Landscape Architecture Thesis	25	15	10

SEMESTER IV

LANDSCAPE CONSERVATION

Course Code: LA 402

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Asst. Prof. Ranjitha Govindaraj

Course Objectives:

- To understand the difference types of Landscape Assessment techniques and conservation.
- To accommodate the knowledge of Landscape resources during planning.

Course Contents:

UNIT –I

Introduction to the concept of Landscape Conservation, Principles of Landscape Conservation. Types of Landscape for Conservation. Layers in Landscapes, Values in Landscapes

UNIT –II

Introduction to Historical perspective of Landscape Conservation – Eurocentric and Indian. Impact of Human activities on Historic Landscapes.

Introduction to Cultural Landscapes -Role of communities in Conservation of Landscapes. UNESCO Cultural Landscapes – examples.

UNIT –III

Impact of Large scale projects on Landscapes – Dams, Reservoirs, mining and industries etc.

Methodology of Landscape Conservation, Documentation process, Documentation techniques, examples. Burra Charter and the NARA document.

UNIT –IV

Landscape conservation Policies – International, National, State, Regional and Local level.

UNIT –V

Relevance of Landscape Conservation in Modern Era

Course Outcomes (COs):

- CO1:** Understanding of Landscape Planning and Landscape Conservation with proper assessment results and cost benefit analysis. (PO3, PO4, PO5)
- CO2:** Understanding the process and role of different organizations. (PO3, PO4)
- CO3:** Knowledge on Landscape management at the regional level. (PO2, PO3)
- CO4:** Knowing different Acts and policies at different level. (PO3)
- CO5:** Assessing and studying the Landscape Conservation of modern era. (PO3, PO4)

References:

1. Strategies for Sustainable Rural Development –Singh Surat
2. Sustainable Design: Towards New Ethic in Architecture and Town Planning – Contal, Marie-Helene
3. Green Architecture: Guide to Sustainable Design -- Crosbie, Michael J
4. Wetlands, A Threatened Landscape - Michael Williams
5. Architecture in Conservation: Managing Development at Historic Sites - James Strike
6. Models for Planning Wildlife Conservation in Large Landscapes- Joshua J. Millspaugh and Frank R. Thompson,
8. Climate and Conservation: Landscape and Seascape Science, Planning, and Action- Charles C. Chester
9. Applying Landscape Ecology in Biological Conservation- Gutzwiller, Kevin
10. Applying Ecological Principles to Land Management- Dale, Virginia H., Haeuber, Richard A.
11. Gardens & Landscapes in Historic Building Conservation - Marion Harney
12. Urban Nature Conservation: Landscape Management in the Urban Countryside- Taylor & Francis

SEMESTER IV

LEGAL ASPECTS & ENVIRONMENTAL LEGISLATION

Course Code: LA 403

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Associate Prof. Surekha R

Course Objectives:

- Introduction to legal aspects and terminologies
- Understanding of various environmental legislation applicable in the country and across the globe
- Understanding of various town planning legislation applicable in the country
- Understanding the significance and application of the same in landscape projects

Course Contents:

UNIT I

Significance and Concept of Constitution and Laws in Indian Scenario

Indian Constitution: Concept of Law in Indian Scenario, legislation, Meaning and terms of law, ordinance, bill, act, regulation, and bye-laws, importance and significance of laws in relationship to landscape architect, Process of law making,

UNIT II

Environmental Legislation in India

Significance, Powers and function, application, penalties and current scenario of: Environmental Protection Act, Air Act, Water Act, Mining Act, Forest Act, Wetland Act, Biodiversity Act, National Green Tribunal Act, Tribal Act, Wildlife Protection Act, Ancient Monument Act, International Environmental regulation and treaties

UNIT III

Land Acquisition

Significance, Process of acquisition, ownership details, issues, penalties of land Acquisition 1894, The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013

UNIT IV

Panchayat and Municipalities

Need of 73rd and 74th amendments, Balwant Rai Metha Committee and Ashok Metha Committee, Evolution of 73rd and 74th amendment, Distribution of Power – 3 tier governance

system, importance of the amendment, implementation of the amendment in different region, issues of the amendment

UNIT V

Town Planning Legislation in India and Abroad

Town and Country Planning Act, Importance and Need of Development Plans in India, Hierarchy and significance of green area in development plans, Concept of Planning in other countries

Course Outcomes (COs):

- CO1:** Understand various provisions of legal aspects in Indian constitution and meaning of law, regulation, Abatements (PO1, PSO4)
- CO2:** Analyze and Understand the application of Acts in Indian Scenario (PO1, PO2, PSO c)
- CO3:** Understand the significance and process of land Acquisition (PO2, PO3, PSO c)
- CO4:** Need and significance of 73rd and 74th amendment of Indian Constitution (PO2, PO3, PSO c)
- CO5:** Understand the importance and significance of Town Planning legislation in India and concept of planning other countries (PO3, PO4, PO5, PSO a, PSO b, PSO d)

References:

1. Our National park policy, The John Hopkins Press, 1961 – Ise John
2. Parks and Recreational Needs in Urban area, Twayne Publishers Inc. 1969 - Commissioner Envor C. Cymoodhhames
3. Professional Practice of Landscape Architecture - Walter Rogers
4. Project Management for the Design Professional- Frank Burstein,
5. Making Environmental Law: The Politics of Protecting the Earth - Nancy E. Marion
6. The Making of Environmental Law - Richard J. Lazarus
7. The Global Environment and International Law - Michael J. Lynch; Ronald G. Burns
8. Environmental Law, Crime, and Justice - Paul B. Stretesky
9. Protecting Life on Earth: An Introduction to the Science of Conservation- Michael P. Marchetti; Peter B. Moyle
10. Environment and Law- David Wilkinson

SEMESTER IV

PROFESSIONAL PRACTICE & LANDSCAPE MAINTENANCE

Course Code: LA 404

Credits: 3:0:0

Prerequisite: Nil

Course Coordinator: Prof. Pushpa Devanathan

Course Objectives:

- To educate the students on the various aspects of a Landscape design practice.

Course Contents:

UNIT –I

The clients: different kinds of clients including public and local authorities engaging the services of Landscape Architect. The extent and variety of services performed by the landscape Architect;
Professional ethics and code of professional conduct.

UNIT –II

Tender Documents, calling of tender, measurements, analysis of rates, plant materials earth grading, masonry, paving, drainage etc. Bills of quantities, abstract of cost.

UNIT –III

Contract documents: procedure involved in awarding the contract, condition of contract, Specification, bill of quantities, cost estimation.

UNIT –IV

Condition of engagement and scale of professional charges: Terms and conditions used by professional Institutes.

UNIT –V

Landscape Architecture competition – Purpose, Types, Competition guide lines, conducting landscape architectural Institutes. Landscape Maintenance

Course Outcomes (COs):

CO1: Knowledge about landscape consultancy practice, Contract management. (PO2, PO3)

CO2: Understand code of conduct (PO2, PO3, PSO 2)

CO3: Understand the process and role of an architect in project execution. (PO3, PO4)

CO4: Understand the landscape management and maintenance. (PO3, PO4)

CO5: To understand the extent of service offered. (PO4, PO5, PSO 4)

References:

1. Rogers Professional Practice of Landscape Architecture
2. Project Management for the Design Professional - Burstein
3. Professional Practice of Landscape Architecture – Walter Rogers
4. Professional Practice by S.V Ravindra
5. Professional practice by Roshan Namavathi