

Proposal
for
Post Graduate Diploma in Landscaping and
Ornamental Gardening

By
Kerala Agricultural University

Annexure I

Course Catalogue

I Semester (Courses- 15 Credits)

1. PGDL -101- Fundamentals of Gardening (2+1)
2. PGDL- 102-Components of landscaping and Styles of Gardens (2+1)
3. PGDL- 103- Land scape design studio and softwares (2+2)
4. PGDL-104-Entrepreneurship development and project management in landscaping (1+1)
5. PGDL-105 -Cultivation of ornamentals (2+1)

II Semester (Courses- 9 Credits, Dissertation- 6 credits)

6. PGDL-106- Landscape construction and management (2+1)
7. PGDL-107- Plant protection in landscapes and ornamental gardens (2+1)
8. PGDL-108-Indoor gardening and interiorscaping (2+1)

II. Dissertation - 6 credits

Sl No	Course Details		Credit
1	First Semester	Courses	15 (9+6)
	Second Semester	Courses	9 (6+3)
		Dissertation	6 (0+6)
	Total Credit Load		30 (15+15)

Annexure II

Syllabus

PGDL- 101-FUNDAMENTALS OF GARDENING (2+1)

Theory

Horticulture - definition, importance, divisions, classification of crops;

Introduction to landscaping, gardening and commercial floriculture – importance and prospects – History of gardening in India –landscaping - gardening - Classification of plants in landscape perspective – Trees, shrubs, climbers, annuals, herbaceous perennials, bulbous crops, palms, ferns, cacti & succulents, aquatic ornamentals, indoor plants – classification of gardens based on crops grown – fruit garden – ornamental garden – herbal garden – kitchen garden -

Horticultural practices related to gardening – training - pruning –burlapping – benefits of training & pruning - Training trees, shrubs, climbers- pruning trees – crown thinning- crown raising – crown reduction – Training shrubs – pinching- thinning –heading back – Burlapping in landscaping

Plant propagation & Nursery techniques in gardening – propagation of plants -- Propagation by seed - seed qualities, seed testing, seed germination - types of seed dormancy, pre-sowing treatments – measures to improve germination. Seed production in annual flower crops – Vegetative propagation methods – modified propagating structures – corms – bulbs – off shoots – suckers – rhizomes – tubers – bulbils – kiekies – stolons –propagation by cuttings – type of cuttings - measures to enhance rooting of cuttings – propagation by layering –methods of layering - Propagation by grafting & budding - stock - scion sections, incompatibility; Grafting and budding - methods - advantages and disadvantages - separation and after care; Micro propagation of horticultural plants - definition, principles, methods, advantages and disadvantages, field of application in ornamentals.

Nursery lay out & structures – green house – shade house – rain shelter – mist chamber – potting shed - composting shed – progeny orchards

Propagation media – mixtures – soilless media – preplanning treatments – containers in nursery management – polythene bags – pots - protrays

Plant growth regulators in horticulture - natural and synthetic regulators - preparation and methods of application

Gardening tools & implements – garden spade – rake – fork – garden shears – secateurs – grafting & budding knife - pruning saw – chain saw – lopping shears – pole pruners – mowers – brush cutter – garden tillers

Practical

Familiarization with propagation structures, containers, gardening tools and implements, preparation of media.. Studies on seed testing, and storage. Practice in propagation of plants through seeds. Practice in rootstock production, vegetative propagation methods – cutting, budding, grafting, layering etc. separation of special type of propagules. Use of growth regulators for plant propagation. Study of propagation through tissue culture. Studies on preparation of designs and estimates for establishment of plant propagation unit, plant growing structures and tissue culture hardening. Visit to different types of nurseries, selection of site and layout– Familiarization with components of nurseries– handling, maintenance, display and sales of plants – cultural practices – Estimation of production costs for different kinds of planting materials. Practice of potting /bagging, re-potting etc. Packing and transport of nursery materials. Registers to be maintained in a commercial nursery. Familiarization with the operation of garden tools, implements.

Suggested Reading

Laurie, A. & Ries, V.H. 2012. Floriculture- Fundamentals and Practices, Agrobios, Hartmann, HT. and Kester, D.E.1986. Plant Propagation - Principles and practices. Prentice Hall, New Delhi.

Peter, K. V. Basics of Horticulture. New India Publishing Agency, New Delhi.

Randhawa GS & Mukhopadhyay A. 1986. Floriculture in India . Allied Publishers.

Rajmohan,K., Soni,K.B., Gomathi, KS & Prakah,R. 2004. Essentials of Plant Tissue Culture. Kerala Agricultural University

Larson, R.A., 1980. Introduction to Floriculture. Academic Press , London

Sheela, V.L. 2011. Horticulture. MJP Publishers, Chennai.

Singh, J. 2002. Basic Horticulture, Kalyani Publishers.

PGDL-102- COMPONENTS OF LANDSCAPING AND STYLES OF GARDEN (2+1)

Theory

Elements of landscaping - plants, water, stone, wood, metal, glass, lighting, sound, smell, touch

Principles of landscaping – axis, balance – visual equilibrium, scale – absolute, relative & proportion, rhythm, emphasis, harmony & unity, restraint

Elements of design/beauty components – color, form, texture, point & line –color –properties of color – color wheel – color schemes – design qualities of color of softscapes – criteria of selection of colors in gardens – color sequence

Form – tree forms – visual effects of various forms – shrub forms – ground cover forms –

Texture – softscape textures – hardscape textures – properties of texture – texture sequence & visual effects –

Line – properties of lines – point – focal points – visual illusions in landscape – perspective – vista - prospect

Components/features of landscapes and gardens, descriptions and functional uses –

Living components – Non- living components – Enrichment items-Description and uses.

Plant components: Lawn, shrubbery, arboretum, fernery, palmatum, flower beds and borders, ground covers, carpet beds, bamboo grooves, topiary, trophy, hedges, edges, rockery, water garden, floral clock

Non- plant components: Arches, pergolas, trellises, garden walls, garden fence, walks, paths, roads, arbour, bridges, garden adornments- fountains, statues, urns, sundials, bird baths, boxes, plant stands, garden seats, garden lights, water-pools, water cascades, decorative sprinklers, garden lighting including solar lights

Hardscaping - xeriscaping

Types of gardens –Formal and informal gardens- Styles of Gardening – Mughal, English, Japanese, Italian, Persian - Hindu Type Gardens - Vanams, sacred groves and zen gardens.

Special types of gardens- Roof garden, terrace garden, vertical garden, sunken garden, water garden, bog garden, rock garden, shade garden, clock garden, colour wheels, butterfly garden, terrarium, bottle garden, dish garden, window gardening, kitchen garden, herbal garden - Hydroponics-soilless gardening, types, management

Eco-tourism – theme parks – therapeutic gardening –

Urban landscaping – highway landscaping – Landscaping industrial sites, institutions

Popular Gardens in India: Lal Bagh, Bengaluru (Karnataka), Brindavan Gardens, Mysore (Karnataka), Government Botanic Gardens, Ootacamund (Tamil Nadu), Rashtrapati Bhavan Garden, New Delhi, Mughal Gardens of Kashmir, Shalimar Garden, The Mughal Garden, Pinjore (Haryana), Chandigarh Rose Garden, Taj Mahal Gardens, Agra , The Sim's Park, Coonoor , The Indian Botanic Garden, Kolkata (West Bengal), Llyod Botanic Garden, Darjeeling (West Bengal), National Botanical Research Institute, Lucknow (Uttar Pradesh), Rock Garden of Chandigarh, The Ramoji Film City Gardens, Hyderabad

Practical

Identification of trees, ornamental shrubs, climbers, annuals, bulbous plants, herbaceous perennials, ferns, palms, bromeliads, aquatic plants – Hedge making & maintenance – edging – topiary – carpet bedding – lawn making – maintenance – establishment of butterfly garden -visit to eco- tourism spots – sacred groves; Familiarization with the layout of urban landscape – institution garden – therapeutic garden -and preparation of plans for gardens and landscapes. Preparation of special type of gardens - Garden visits and enumeration of components

Suggested Reading

Bose TK, Maiti RG, Dhua RS & Das P. 1999. Floriculture and Landscaping. Naya Prokash.
De, L.C. 2012. Handbook of Gardening, Aavishkar Publishers, Jaipur
Randhawa GS & Mukhopadhyay A. 1986. Floriculture in India. Allied Publishers.
Sabina GT & Peter KV. 2008. Ornamental Plants. New India Publishing Agency, New Delhi.
Sundaram, v. 2016. Textbook on Commercial flowers and Ornamental Gardening. Kalyani Publishers
Syamal, M.M. 2014. Commercial Floriculture. Jaya Publishing House, New Delhi

PGDL- 103- LANDSCAPE DESIGN STUDIO AND SOFTWARES (2+2)

Theory

Landscape – plan preparation – symbols –Landscaping terms – Planting design considerations -
Landscape design for- home garden: principle areas of a home garden, designing a home garden,
garden plans for small areas, trees suitable for small gardens, roof garden, vertical garden, low
cost, medium cost, fully automated vertical garden

Landscape design for recreational gardens and children's parks: Children's parks and school
gardens, playgrounds (cricket, football, golf, hockey, tennis etc)

Landscape design for educational institutions, and religious places

Landscape design for industrial areas: Objectives, Planning, Principles, Basic components,
desirable characteristics of trees for an industrial landscape, mechanization of garden

Landscape design for public places: public buildings, places of historic importance, places of
worship, gardens for cities

Landscape design for railway stations, bus terminals, dam sites, hydroelectric stations, river
banks, road avenues, high rise buildings: Plants for railway platforms and lines, ornamental trees
recommended for town roads, bus terminals and airports, plants for highways, landscaping banks
of rivers and canals, dam site landscaping

Exposure to CAD (Computer Aided Designing) – Applications of CAD in landscape garden
designing - AUTOCAD Introduction and application AUTOCAD Screen components Drawing
Area, Command Window, Navigation Bar, Status Bar

Involving commands in AUTOCAD, AUTOCAD dialog boxes, familiarization, Starting New
Drawings, Open a drawing, Use a template, Wizard, Saving work,

Basic drawing and editing with AUTOCAD , Coordinate systems Designing basic shapes, lines,
drawing with layers, Block Designs, Attribute of Design, Layout, Scaling, Advanced Commands
Creating blocks, Attributes, External References,

Point picking methods, Toolbars and Icons, File handling functions, Modifying tools,
Modifying comments, Isometric drawings, Drafting objects

Using patterns in AUTOCAD drawing, Dimension concepts, Hyperlinking, Script

making, Using productivity tools, e-transmit file, making sample drawing for outdoor and indoor
garden by AUTOCAD 2D Drawing techniques, Drawing web format design, 3D Modelling

-Basics of Photoshop software in garden designing. -3D drawing methods

Practical

Topographic survey - Plan preparation - site analysis – preparation of base map – measurements – draft sketching – final plan –Designing home gardens - gardens in industrial areas, children's park, education institutions roof garden, vertical garden - Planning and designing of recreation gardens

Design of railway stations, bus terminals, dam sites, river banks and road avenues – highway landscape

Practicals in AUTO CAD Practices in point picking methods, Using tool bars and icons, Using modifying tools and modifying comments

Isometric drawings, using productivity tools,

Designs by AUTOCAD for home garden, institutional garden and special types of garden

Using tools and info-box for 3D drawing - Using Photoshop package for 3D picture insertion -

Suggested Reading

Nambisan KMP.1992. Design Elements of Landscape Gardening. Oxford & IBH.

Randhawa, GS & Mukhopadhyay A. 1986. Floriculture in India. Allied Publishers.

Sundaram, V. 2016. Textbook on Commercial flowers and Ornamental Gardening. Kalyani Publishers

Christine Wein-Ping Yu 1987. Computer-aided Design: Application to Conceptual Thinking in Landscape Architecture.

PGDL-104- ENTREPRENEURSHIP DEVELOPMENT AND PROJECT MANAGEMENT IN LANDSCAPING (1+1)

Theory

Entrepreneurship – Concept, characteristics, Approaches, Theories

Traits of entrepreneurs – Risk taking, Leadership, Decision making, Planning, Organising, Coordinating and Marketing. Stages of establishing enterprise steps to be considered in

setting up an enterprise, branding, feasibility report, risk and market analysis, legal requirements.

Success and Failure stories for enterprises in land scaping– Issues relating to success and failure of enterprises – Personal, Production, Finance, Social, Marketing

Qualities and skills of a manager. Planning – Concept, Nature, Importance, Types, Making planning effective. Organizing – Meaning of Organization, Concept, Principles, Organizational Structure, Span of Management, Departmentalization, Authority and responsibility, Delegation and decentralization, line and staff relations.

Agricultural lending – Direct and Indirect Financing - Financing through Co-operatives, NABARD and Commercial Banks and RRBs.

Credit rating Agencies in India

Preparation of financial statements - Balance Sheet, Cash Flow Statement and Profit and Loss Account.

Ratio Analysis and Assessing the performance of firm.

Project Approach in financing agriculture. Financial, economic and environmental appraisal of investment projects

Identification, preparation, appraisal, financing and implementation of projects.

Project Appraisal-Discounted and undiscounted measures.

GST and its formalities in setting up an enterprise.

Intellectual Property Rights and Plant Protection of Varieties and Farmers Right Act (PPVFRA).

Taxation in gardening sector

Practical

Field visit to Successful enterprises in landscaping-Study of Characteristics of Successful entrepreneurs - Case Studies of Success / Failure

enterprises- Exercise on Market Survey

Designing organizational structure -Group activity on leadership development skills

Preparation of financial statements using firm level data.

Visit to financial institution.

Preparation of project reports.

Undiscounted Measures and their limitations.

Project appraisal techniques – Discounted Measures,

Financial instruments and methods – E banking, and core banking.

Banking structure in India,

Types of loans.

Tenders and quotations.

Suggested Readings

- Gupta CB. 2001. *Management Theory and Practice*. Sultan Chand & Sons.
- Indu Grover. 2008. *Handbook on Empowerment and Entrepreneurship*. Agrotech Public Academy.
- Khanka SS. 1999. *Entrepreneurial Development*. S. Chand & Co.
- Singh D. 1995. *Effective Managerial Leadership*. Deep & Deep Publ.
- Tripathi PC & Reddy PN. 1991. *Principles of Management*. Tata McGraw Hill.
- Vasanta Desai. 1997. *Small Scale Industries and Entrepreneurship*. Himalaya Publ. House.
- Grover, Indu. 2008. *Handbook on Empowerment and Entrepreneurship*. Agrotech Publishing Co., Udaipur.

PGDL- 105-CULTIVATION OF ORNAMENTALS (2+1)

Theory

Varietal wealth and diversity, special nursery practices, garden calendars, containers, substrates. Growing environment for open cultivation, soil requirements, artificial growing media, soil decontamination techniques, planting methods, influence of environmental parameters, light, temperature, moisture, humidity and CO₂ on growth and flowering.

Water and nutrient management, fertigation, training and pruning, special garden practices, use of growth regulators, physiological disorders and remedies, production for exhibition purposes.

Protected cultivation, Low cost/Medium cost/High cost structures – economics of cultivation; Location specific designs; Structural components; Suitable flower crops for protected cultivation.

Environment control – management and manipulation of temperature, light, humidity, air and CO₂; Heating and cooling systems, ventilation, naturally ventilated greenhouses,

Design and layout of drip, sprinkler and fertigation system, water and nutrient management, Special horticultural practices (pinching, disbudding, deshooting, deblossoming, etc.); Staking and netting,. Flower forcing and year round flowering through physiological interventions in selected ornamentals, chemical regulation.

Lawn grasses and ground cover plants- Types, species, varieties, hybrids; Basic requirements, concepts of physical, chemical and biological properties of soil pertaining to lawn grass establishment. Selection of grasses for different locations; Grouping according to climatic requirement and adaptation

Cultivation of :Annual flowers, herbaceous perennials (flowering and foliage types), Shrubs and Trees, Climber and Creepers, Cacti and succulents, Ferns, palms, cycads, bulbous ornamentals, bromeliads, water plants etc.

Practical

Cultivation of ornamentals-annuals, herbaceous perennials, cacti, succulents other ornamentals, orchids and anthuriums, Propagation techniques, polyhouse operation, Practices in manuring, drip and fertigation, foliar nutrition, growth regulator application, treatments to enhance flowering, Training and pruning techniques, Special practices -Pinching, disbudding, staking, etc soil decontamination techniques, practices in environmental control systems special horticultural practices.

Growing climbers and hanging plants

Identification of lawn grasses, Lawn making – Site selection and evaluation,

Preparatory operations in turf making, Practices in turf establishment,

Preparatory operations; Growing media used for turf grasses – lawn establishment methods, seeding, sprigging/dibbling, plugging, sodding/turfing, turf plastering, hydroseeding, astro-turfing.

Suggested Reading

Bhattacharjee SK. 2006. Advances in Ornamental Horticulture Vols. I-VI. Pointer Publishers

BoseTK &Yadav LP. 1989. Commercial Flowers. Naya Prokash, Calcutta

Lauria A & Victor HR. 2001. Floriculture – Fundamentals and Practices Agrobios

Misra,RL. & Misra,S. 2017.Commonly used Ornamental Plants. Kruger Brentt Publishers. UK.Ltd

Prasad, S.& Kumar,U. 2008. Commercial Floriculture. Agrobios

Randhawa, GS & Mukhopadhyay A. 1986. Floriculture in India. Allied Publishers.

Sabina GT & Peter KV. 2008. Ornamental Plants. New India Publishing Agency, New Delhi

PGDL-106- LANDSCAPE CONSTRUCTION AND MANAGEMENT

Theory

Commercial landscape gardening- history, materials for development of garden components, garden design, Design making by different garden styles and types.

Expenses to model landscaping units of all category, Creativity and communication skills for landscape architect, Way of designing a landscape project.

Building construction, brick and stone masonry, building technology, irrigation layouts, surface and subsurface, drainage, waste water management, solid waste management, problem soil management

Assessing site and plants adaptability for different locations, Landscape engineering - Topographical survey and designing concept, Area measurement, Levelling.machineries-functions and operations, special techniques in garden landscaping -burlaping, waterscaping, hardscaping, wallscapes, lawn making, topiary styles specializing,

Care and management of living and non-living components,

Lawn management - Lawn irrigation, nutrition, special practices, aerating, rolling, soil top dressing, use of turf growth regulators (TGRs) and micronutrients, lawn mowing – different types of lawn mowers, techniques to minimize wear and compaction, weed control, biotic and abiotic stress management in lawn. Problems in lawn making, Ground covers as alternative to lawn.

Establishment and maintenance of turfs for playgrounds, viz. golf, football, hockey, cricket, tennis, etc.

Turfing for roof gardens- Requirements and maintenance

Practical

Identification , functions of garden designing materials, machineries

Assessing site and plants adaptability for different locations, Landscape engineering based on topography.

Special techniques in garden landscaping (burlaping, waterscaping, hardscaping, wallscaping, lawn making, topiary styles specializing).

Case study with the successful landscapist, Execution strategies, Assessing a successful design in site.

Establishment, care and maintenance of ground covers

Lawn management -Water and nutrient management; special practices – mowing, raking, rolling, soil top dressing, Project preparation for turf establishment, automated irrigation systems

Visit to IT parks, model cricket and golf grounds, airports, corporates, Govt. organizations;

Renovation of lawns.

Suggested Reading

Randhawa GS & Mukhopadhyay A. 1986. Floriculture in India . Allied Publishers.

PGDL-107- PLANT PROTECTION IN LANDSCAPES AND ORNAMENTAL GARDENS (2+1)

Theory

Introduction to the study of diseases of ornamental crops, economic importance, management

Principles of crop disease management – importance-General principles- Avoidance-Exclusion-Protection-Resistance and chemotherapy

Integrated plant disease management (IDM)- Concepts, advantages and importance,

Cultural methods, physical and chemical control in plant disease management, Plant Quarantine and Inspection – Rules and Regulations

Fungicides- Classification- Chemical groups of fungicides –inorganic, organic, systemic fungicides, antibiotics etc ,

Economic importance, symptoms, causal organisms and integrated management of diseases of lawn grass-Brown patch, Large Patch, Pythium blight, Pink snow mold

Economic importance, symptoms, causal organisms and integrated management of diseases of Anthurium – Black rot, Anthurium blight, Root rot, Anthurium decline, Anthurium mosaic

Economic importance, symptoms, causal organisms, and integrated management of diseases of Orchids - Anthracnose, Black rot, Leaf blight, Bacterial rot and viral diseases of orchids and major diseases of Gladiolus

Diseases of Rose-black spot, powdery mildew, rust, die back, blight, leaf spot, anthracnose, bacterial leaf spot and viral diseases

Economic importance, symptoms, causal organisms and integrated management of diseases of Jasmine- Collar rot and root rot, Leaf blight, Leaf spot, Wilt, Rust, phyllody of Jasmine and major diseases of Tuberose

Economic importance, symptoms, causal organisms and integrated management of diseases of Carnation , Gerbera, China aster and Chrysanthemum

Economic importance, symptoms, causal organisms and integrated management of diseases of– Marigold, Heliconia, Tuberose , Crossandra, , Dahlia and other ornamentals

Economic importance, symptoms, causal organisms and integrated management of diseases of Ornamental palms– Ganoderma Butt rot and *Phytophthora* diseases and major diseases of ornamental trees - root rot, wilt, leaf spot etc.

Economic importance, symptoms, causal organisms and integrated management of diseases of foliage plants Alternanthera, Coleus, Euphorbia, Caladium ,Begonia, Ferns etc .

Introduction to Agrl. Entomology

Principles of pest mangement

Integrated Pest management – concept and methods

Integrated Pest Management: tools of IPM

Physical methods

Mechanical methods

Cultural methods

Biological control- Predators

Biological control- Parasitoids

Microbial control – Fungi, Virus, bacteria, Nematodes

Chemical methods- Classification of insecticides

Inorganic insecticides, Botanical insecticides- Neem and its commercial formulations

Other biorational methods

Bioecology, nature of damage and management of important pests of Rose, Jasmine, Anthurium, Orchids, Gladiolus Lawn grass, Tuberose, Gerbera and other flowering and foliage plants

.Principles of weed management – Common weeds-weed management techniques – weed indices. Herbicides –classification based on chemical, physiological, methods of application and selectivity– mode and mechanism of action–herbicide selectivity–Recommended doses-herbicide antidotes/safeners.

Integrated weed management - economics of weed management – new trends in weed

Management

Practical

Diagnosis and detection of plant diseases

Preservation of disease specimens – wet and dry preservation

Familiarisation with fungicides and equipments

Preparation of Bordeaux mixture and Bordeaux paste and cheshunt compound

Preparation of fungicide spray solution

Soil solarisation , Soil fumigation and Root feeding

Biological control of plant pathogens and *Mycorrhizae* in plant disease management

Identification of important pests of Rose, Jasmine, Anthurium, Orchids, Gladiolus Lawn grass, Tuberose, Gerbera and other flowering and foliage plants

Familiarization of insecticides belonging different groups

Insecticide calculation and preparation of spray fluid

Familiarisation of the different plant protection equipments

Identification of important weeds and preparation of herbarium.

Calibration of sprayers.

Calculation of herbicide requirements.

Use of various types of spray pumps and nozzles.

Preparation of spray solutions and application of herbicides

Suggested Reading

Verma LR, Verma AK & Goutham DC. 2004. Pest Management in Horticulture Crops : Principles and Practices. Asiatech Publ., New Delhi.

Sohi, H.S. 1992. Diseases of ornamental plants in India. ICAR, New Delhi.

Sharma RC & Sharma JN. (Eds). 1995. Integrated Plant Disease Management. Scientific Publ., Jodhpur.

Rajeev K & Mukherjee RC. 1996. Role of Plant Quarantine in IPM. Aditya Books.

Satha, TV. 2012. Pests of Ornamental Plants. Daya Publishing House, New Delhi

Thomas, C.G. and Abraham, C.T. 2007. Methods in Weed Science. Kerala Agricultural University, Vellanikkara

Gupta, O.P. 2007. Weed management – Principles and Practices. Agrobios

H.S. Sohi. 1992. *Diseases of Ornamental Plants in India*, Publication and Information Division, ICAR, New Delhi-110012.

PGDL-108- INDOOR GARDENING AND INTERIORSCAPING (2+1)

Theory

-Significance of interior scaping, environmental factors in indoor gardening- light, humidity, points to remember in indoor plant selection, management, methods of indoor gardening, indoor plants for air purification, hanging baskets and window boxes and terrariums - miniature garden

-Bonsai – Introduction, styles, plants and containers, characteristics of plants suitable for bonsai, pots or containers for bonsai, plants suitable for indoor bonsai

Cultural practices, special practices, care and maintenance, source plants for bonsai making, time of planting, potting and repotting, training, pruning and pinching, irrigation, planting medium

Aquascaping, materials, living components, production, management

-Flower arrangement - Principles of flower arrangement, Elements of design, selection of flowers and foliage, broad approaches in flower arrangement styles, Ikebana, western flower arrangement. Tools containers and accessories, designs for special occasions, collection and preparation of flowers and foliage, vase solutions' preparation.

Flower arrangement, styles, Ikebana, Morebana, free style. Selection of containers and accessories for making floral products and decorations.

-Dry flowers– Identification and selection of flowers and plant parts; Raw material procurement, preservation and storage; Techniques in dry flower making – Drying, bleaching, dyeing, embedding, pressing; Accessories; Designing and arrangement – dry flower baskets, bouquets, pot-pourri, wall hangings, button holes, greeting cards, wreaths; Packing and storage.

Floral pattern / flower rangoli (c) bouquets - types of bouquets

Techniques for extending shelf life of ornamentals, packing and transport

-Value addition in flowers: Prospects of value addition, National and global scenario, production and exports, Types of value added products, value addition in cut and loose flowers.

Practicals

Identification of indoor plants; cultivation care and maintenance

Techniques in flower arrangement;

Techniques in floral decoration;

Preparation of bouquets, flower baskets, corsages, floral wreaths, garlands with fresh flowers;

Identification of plants for dry flower making;

Practices in dry flower making;

Preparation of dry flower baskets, bouquets, pot-pourri, wall hangings, button holes, greeting cards, wreaths, etc.

Visit to value addition units

Suggested Reading

Mc Daniel, G.I. 1996. Floral Design and Arrangement. Prentice Hall Company, Virginia

Packer J. 1998. The Complete Guide to Flower Arrangement. D.K. Publishing, Inc, New York Press, New York

Randhawa GS & Mukhopadhyay A. 1986. Floriculture in India . Allied Publishers.

Sheela, V.L. 2011. Horticulture. MJP Publishers, Chennai

Swarup V. 1993. Indoor Gardening. ICAR, New Delhi

Annexure III

List of faculty members:

Faculty members in the following departments will be entrusted for assisting in courses and other programmes

Department of Floriculture and landscaping

Instructional farm

Vegetable Science

Plantation Crops and Spices

Post Harvest Technology

Agricultural Engineering

Soil Science and Agricultural Chemistry

Agricultural Statistics

Agricultural Economics

Agricultural Extension

Agricultural Entomology

Plant Pathology

Agronomy

Community Science

Other than the faculty, sessions on landscape design studio – softwares need to be outsourced by a professional landscape architect.

