

HORTICULTURE CERTIFICATE COURSE DESCRIPTIONS

*CIS 1503 MICROCOMPUTER APPLICATIONS-MS OFFICE

Familiarizes the student with fundamental terminology and concepts of microcomputers, their operating systems and disk management, as well as major production applications including word processing, spreadsheets, data base management systems, and may include graphics, data communications and desktop publishing. Familiarity with computer keyboard is recommended. Hands on computer instruction.

HRT 1013 PRINCIPLES OF HORTICULTURE

Horticulture fundamentals course covering the characteristics of and uses for horticultural plants, plant growth principles and plant care practices, the scope of the horticulture industry, basics in plant propagation, landscape plant maintenance, fruit and vegetable gardening and pest control. Lab: three hours per week. (Sp, Su, F)

HRT 1023 SUSTAINABLE HORTICULTURAL PRACTICES

This course will provide a base knowledge of the principles and practices of sustainable horticultural management systems. The class will review soil biological processes, pest management, and production systems. The course will also include studies of alternative farming systems, organic agriculture and National Organic Program (NOP) certification. Study of specific applications of sustainable production such as vegetables, fruits and ornamentals will also be included. Prerequisite: HRT 1013

HRT 1103 LANDSCAPE GRAPHICS I

Drafting and illustration techniques for landscape designs. Introduction to landscape drawing, delineation, lettering and color rendering with applications to simple and more complex landscape plans. Additional \$15 lab fee. Lab: three hours per week.

HRT 1123 HOME GARDENING - FRUITS AND VEGETABLES

Emphasis is placed on fruits and vegetables to be grown in a home garden. Cultural and environmental problems associated with each fruit or vegetable crop to be studied. Lab: three hours per week. (s)

HRT 1153 BEGINNING FLORAL DESIGN

Fundamentals of floral arrangement and design with hands-on experience to learn the basic skills necessary for designing and arranging fresh flowers and dried materials for use in the home or in a retail shop. Skills useful to flower shop employment are emphasized. Additional \$100 lab fee. Lab: three hours per week.

HRT 1163 BILINGUAL HORTICULTURE COMMUNICATIONS

This course is designed to assist supervisors and employees within the horticulture industry with the Spanish/English language transition and to gain better understanding of contemporary Hispanic culture. Emphasis will be placed on translating and then properly speaking horticulture terminology in Spanish while addressing cultural and communication issues. The linkages and implications of these issues will be examined as they apply to successfully managing and understanding a diversified work force.

HRT 1173 MARKET GARDENING – FALL/WINTER PRODUCTION

This course will address fall and winter production of various horticultural crops including vegetables, fruits and ornamentals for direct markets. Cultural practices including soil building, fertilization, pest management, harvest and post harvest handling will be addressed. This course will also cover season extension structures, equipment needs, farm management, and marketing. Co-Req: HRT 1013.(f)

HRT 1183 MARKET GARDENING – SPRING/SUMMER PRODUCTION

This course will address spring and summer production of various horticultural crops including vegetables, fruits and ornamentals for direct markets. Cultural practices including soil building, fertilization, pest management, harvest and post harvest handling will be addressed. This course will also cover season extension structures, equipment needs, farm management, and marketing. Co-Req: HRT 1013. (sp)

HRT 1253 INTRODUCTION TO HORTICULTURAL THERAPY

Overview of horticulture as a therapeutic medium for special populations. Emphasis on working with the mentally and physically disabled, genetics, substance abuse recovery program participants and other clientele. History of horticultural therapy, community gardens and adaptive tools are explored. Lab focuses on the implementation of specific horticultural activities for special populations. Additional \$25 lab fee. Lab: three hours per week. (f)

HRT 1321-1323 TECHNICAL PROBLEMS - HORTICULTURE

One to three credits, six credits maximum. Technical problems in horticulture that are of particular interest to horticulture majors. Prerequisite: consent of department head.

HRT 1423 LANDSCAPE AND BIDDING CONTRACTS

Investigation of professional principles and practices in the field of landscape contracting, focusing on costs of business and project implementation. Course work includes: estimating costs for landscape installation and maintenance, bidding on landscape installation and maintenance work, preparation and review of contracts for landscape installation and maintenance, controlling the work and costs of the work under the terms of landscape contracts and subcontracts, and administering a landscape contracting business. Prerequisites: HRT 1013, MATH 0104 and CIS 1113 or CIS 1503.(sp)

HRT 1503 VITICULTURE – INTRODUCTION, SITE SELECTION AND COLD PROTECTION

Provides information about the viticulture history, geographic location where grapes are grown and climatic conditions necessary for viticulture production. Also provides information about clone, variety and rootstock selection. Field oriented experience in vineyard layout, including site selection and preparation, as well as irrigation and frost protection systems. Prerequisite: HRT 1013.(f)

HRT 1513 VITICULTURE – ESTABLISHMENT AND PROPAGATION

Designed to introduce students to morphological characteristics of the grape plant and the process of propagation during the dormant season through bud break. Field experience in the process of vineyard establishment, including trellising and training. Additional field experiences in advanced propagation techniques including vineyard nursery management. Provides students with the skills necessary to prune an established vineyard and emphasizes methods of crop adjustment for improvement of fruit quality. Prerequisite: HRT 1013.(sp)

HRT 1523 VITICULTURE – CANOPY AND HARVEST MANAGEMENT

Provides skills necessary for maintaining the vineyard from the point of pre-bloom through harvest. Emphasizes crop monitoring techniques, pruning, vine manipulation, techniques to determine vine health, pesticide scheduling, handling and application as well as irrigation and fertility management of the vineyard. Additional field experience with harvest management including equipment, processing and handling. Prerequisite: HRT 1503 or HRT 1513.(su)

HRT 1723 GROUNDS MAINTENANCE EQUIPMENT: MECHANICS AND REPAIR

Addresses grounds maintenance power-equipment selection, function and operations. Emphasis is placed on hydraulic systems, trouble-shooting, repair and adjustment of the equipment. Lab: three hours per week.

HRT 1843 IRRIGATION AND DRAINAGE DESIGN

This course is designed to teach student basic principles of irrigation and drainage design. Students will be presented with engineering aspects of water dynamics and hydraulics. Additional topics include soil-water-plant interactions, system components, electrical systems and business practices and estimating. Students will design irrigation systems for residential, commercial and sport fields. Lecture: two hours per week. Lab: three hours per week.

HRT 2003 HORTICULTURAL THERAPY PROGRAM MANAGEMENT

Advances the skills necessary to develop, implement and manage new or existing horticultural therapy programs. Emphasis on patient assessment, establishment of realistic client goals, structuring of horticultural activities and documentation of services. Additional focus on marketing and public relations, funding, grant writing, volunteer management and non-profit organizations. Prerequisite: HRT 1253. (sp)

HRT 2013 MAINTENANCE OF LANDSCAPE PLANTS

Preparation of soil, pruning and training of ornamental trees, shrubs and vines, pest and disease control, fertilization and environmental factors which affect the care and maintenance of landscape plants. Lab: three hours per week. Prerequisite: HRT 1013. (sp)

HRT 2023 HORTICULTURAL SOIL SCIENCE

Principle physical, chemical and biological properties of the soil as related to horticultural plant growth. Soil testing and fertilizer usage: formation and classification of soils, rural and urban land use. Prerequisites: HRT 1013. Lab: three hours per week. (sp)

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HRT 2113 TURFGRASS MANAGEMENT

Selection, establishment and maintenance of turf grass, use of equipment, identification of weeds and chemicals used for turf management. Lab: three hours per week. Prerequisite: HRT 1013.

HRT 2123 LANDSCAPE DESIGN THEORY

The understanding and use of basic design principles and elements and their application to landscape design. Theories of analysis, planning and organization of outdoor spaces for human use and enjoyment. A look at historical styles and approaches to landscape architectural design, and past and present design theories. The study of uses of plant materials for design effect. Additional \$15 lab fee. Lab: three hours per week. Prerequisites: HRT 1013 and HRT 1103

HRT 2133 NURSERY MANAGEMENT AND OPERATIONS

The propagation, production, management and marketing of commercial nursery stock including facilities, equipment, supplies, environmental and pest control. Lab: three hours per week. Prerequisites: HRT 1013. (f)

HRT 2143 LANDSCAPE DESIGN APPLICATIONS

The use of materials, methods of construction, and related systems to support the design process. Emphasis on solving landscape problems through logical analysis and application of design skills. Additional \$15 lab fee. Lab: three hours per week. Prerequisite: HRT 2123, HRT 2313 and/or HRT 2413.

HRT 2153 ADVANCED FLORAL DESIGN

Advanced floral designing and arranging of fresh flowers, dried material and silk flowers. Wedding arrangements, funeral pieces, holiday, commercial accounts and arrangements for special occasions will be emphasized. Retail selling, merchandising and pricing of floral products in a retail shop will be taught. Advanced skill development will be encouraged. Additional \$100 lab fee. Lab: three hours per week. Prerequisite: HRT 1153. (sp)

HRT 2163 PLANT PROPAGATION

Principles and practices used in the sexual and asexual propagation of horticultural plants including seeds, division, layering, cuttings, grafting, budding and tissue culture techniques. Lab: three hours per week. Prerequisite: HRT 1013. (sp)

HRT 2233 LANDSCAPE CONSTRUCTION

Emphasis is placed on the basic information necessary for constructing various elements needed to develop the landscape site. Landscape construction elements including walkways, decking, walls, screens, steps, irrigation, garden pools and fountains, and landscape lighting will be studied. Lab: three hours per week. Lecture: two hours per week. (f)

HRT 2244 HORTICULTURE PRACTICUM

Occupational aspects of ornamental horticulture are covered. An internship in ornamental horticulture in areas such as park maintenance, landscape construction, landscape maintenance, wholesale or retail sales, horticultural therapy or turf management will be established either in the industry or at the Horticulture Center. The lecture will involve problem-solving techniques for the area of specialization. Refinement of skills as well as speed and accuracy will be emphasized. Lab: six hours per week. Prerequisite: Consent of department head

HRT 2253 SPECIAL OCCASION FLORAL DESIGN

Basic principles of floral design as applied to special occasions design work. Emphasis is placed on preparation, pricing and design for weddings, funerals, parties, receptions and other special occasions. Additional \$100 lab fee. Lab: three hours per week. Prerequisite: HRT 1153.(f)

HRT 2263 HORTICULTURAL PEST MANAGEMENT

Introduces and thoroughly covers the topic of pest management in all areas of horticulture technology. Lab: three hours per week. Prerequisite: HRT 1013. (f)

HRT 2313 DECIDUOUS LANDSCAPE PLANTS

Identification and classification of deciduous trees, shrubs, vines and groundcovers with some evergreen trees and shrubs. Includes the study of the plant materials cultural requirements and landscape uses. Lab: three hours per week. Lecture: two hours per week. Prerequisite: HRT 1013 or consent of department head. (su,f)

HRT 2343 CONTROLLED ENVIRONMENTS HORTICULTURE-FALL

This is a study of the operation and management of greenhouses and related environments. Emphasis is on infrastructure, cultural systems, production, and marketing of commercial floricultural, vegetable, and herb crops as practiced in the fall such as fall bedding plants and poinsettia. Lab and field trips are included. Prerequisite: HRT 1013. (f)

HRT 2413 EVERGREEN LANDSCAPE PLANTS

The identification and classification of evergreen trees, shrubs, vines and groundcovers with some deciduous trees and shrubs. Includes the study of their cultural requirements and landscape uses. Lab: three hours per week. Lecture: two hours per week. Prerequisite: HRT 1013 or consent of department head. (sp)

*HRT 2423 COMPUTER GRAPHICS FOR LANDSCAPE DESIGN

Introduction to computer programs utilized in the practice of landscape design. Principles of electronic drafting, utilizing Auto CAD and Photoshop. Students will master drawing set up, basic drawing and modification commands, and file management in AutoCAD. Introductory Photoshop exercises relate to landscape plan and illustration rendering. Applications to the landscape design industry are emphasized. Prerequisite: HRT 1103.(sp)

*HRT 2443 CONTROLLED ENVIRONMENTS HORTICULTURE-SPRING

This is a study of the operation and management of greenhouses and related environments. Emphasis is on infrastructure, cultural systems, production, and marketing of commercial floricultural, vegetable, and herb crops as practiced in the spring such as spring bedding plants and easter lily. Lab and field trips are included. Prerequisite: HRT 1013. (sp)

HRT 2453 HERBACEOUS ORNAMENTAL PLANTS

This plant identification course introduces ornamental annual and herbaceous flowering perennials for garden, landscape and patio spaces. The study includes flowering bulbs, roses, ornamental grasses and herbs. Culture, care and design issues are considered. Lab and field trips are included. Prerequisite: HRT 1013 or consent of department head. (sp,su)

HRT 2463 INTERIOR PLANTS

This plant identification course introduces tropical foliage and flowering plants for interior spaces. Cultural requirements, practical maintenance and design issues are considered, along with an introduction to the interiorscape industry. Lab and field trips are included. Prerequisite: HRT 1013 or approval of department head. (f)

HRT 2533 ADVANCED TURFGRASS MANAGEMENT

Emphasis will be placed on the appropriate grounds maintenance activities for commercial lawn care, sports facilities and golf courses. Advanced topics in turfgrass ecology, turf cultural requirements, pest control and equipment will be studied along with construction techniques of sports turf and day-to-day operations of various facilities. Lab: three hours per week. Lecture: two hours per week. Prerequisites: HRT 1013 and HRT 2113. (sp-odd years)

HRT 2843 IRRIGATION INSTALLATION AND TROUBLESHOOTING

This hands-on course introduces basic irrigation layout, installation, maintenance and troubleshooting techniques. Topics include: gluing and repairing PVC and polyethylene pipe, installing and adjusting heads, electric valve operation, troubleshooting and repairing electric valves and field controllers. Additional topics include pump and well operations, cross connection, winterizing, drainage and micro irrigation system installations. Lecture: two hours per week. Lab: three hours per week. Prerequisite: HRT 1843 (sp)