

## 2007-09 Cal Poly Catalog

### Horticulture and Crop Science Department

## EHS—ENVIRONMENTAL HORTICULTURAL SCIENCE

### **EHS 123 Landscape Installation and Maintenance (4)**

Planting and maintenance of trees, shrubs, ground covers, perennial plantings, color beds, specialty plantings, and small turf areas. Site selection, cultural requirements, scheduling of maintenance activities, pruning, landscape renovation and irrigation system repair. Equipment operation, maintenance, and safety. Speakers from industry. 3 lectures, 1 laboratory. Prerequisite: HCS 110, HCS 120 or consent of instructor.

### **EHS 125 Florist Practices I (3)**

Fundamentals of theory, techniques and skills currently practiced in the florist industry. Intended as consumer education for non-majors as well as initial preparation for pre-professionals. Includes applied art principles, post-harvest care and handling practices, and proper use of florist tools and materials in crafting basic designs. 1 lecture, 2 laboratories.

### **EHS 126 Landscape and Environmental Horticulture Construction (2)**

Design, construction techniques and materials used in horticulture construction. Material quantity estimating, construction material substitutions, tools and equipment associated with horticulture construction. 1 lecture, 1 laboratory. Prerequisite: HCS 110, HCS 120, or consent of instructor.

### **EHS 127 Introduction to Landscape Graphics (4)**

Aesthetic aspects of environmental horticulture, landscape drafting, introduction to computer aided drafting, presentation techniques and garden history. Field trip required. 2 lectures, 2 laboratories.

### **EHS 128 Principles of Horticultural Design (3)**

Aesthetic aspects of environmental horticulture, including landscape drafting, computer aided design, landscape and floral design and history. Design in the use of and presentation of horticultural products. 2 lectures, 1 laboratory. Prerequisite: HCS 110, HCS 120.

### **EHS 201 Field Studies in Ornamental Horticulture (1)**

Field trip to see environmental horticulture in the field. Private and public sector facilities visited. Itinerary varies. Total credit limited to 2 units. 1 activity. Prerequisite: HCS 120.

### **EHS 210 Enterprise Project I (1–4)**

Selection and completion of a management/production project under faculty supervision. Project participation is voluntary and subject to approval by the department head and the Cal Poly Corporation. Degree credit limited to two units. Credit/No Credit grading only. Prerequisite: HCS 110, HCS 120, HCS 124.

### **EHS 225 Florist Practices II (3)**

Expanded exploration and application of design theory to commercial products and services in the retail florist industry. Appropriate utilization of current sales and business practices in a florist setting. Advanced techniques and skills for construction of wedding, high style and sympathy designs. 1 lecture, 2 laboratories. Prerequisite: EHS 125.

### **EHS 230 Environmental Horticulture (4)**

Technical information and recommendations for the residential horticulturist. Propagation, pruning, planting, media, fertilizers, pest and weed control, landscaping, maintenance, identification and care of ornamental plants. Being a wise horticultural consumer. For non-EHS majors. 3 lectures, 1 laboratory.

### **EHS 231, 232 Plant Materials I, II (4) (4)**

Identification, habits of growth, cultural requirements, and use of ornamental plants in the landscape. 3 lectures, 1 laboratory.

### **EHS 245 Horticultural Production Techniques (3)**

Applied principles of plant growth in relation to the production horticulture industry. Emphasis on container media, fertilizing practices, irrigation, plant growth regulators, and miscellaneous growing structures. 2 activities, 1 laboratory. Prerequisite: HCS 120, HCS 124, SS 121, CHEM 110 or CHEM 111.

### **EHS 301 Principles of Landscape Design (4)**

Introduction to basic principles and elements of single-family residential landscape design, design theory, plant composition; creative problem solving, functional and aesthetic uses of landscape materials, client and maintenance criteria, xeriscape concepts, and perspective drawing. Expansion of EHS 127 drafting and drawing skills. 2 lectures, 2 laboratories. Prerequisite: EHS 123, EHS 126, EHS 127; EHS 231 or consent of instructor.

### **EHS 310 Enterprise Project II (2–4) (CR/NC)**

Selection and completion of a management/production project under faculty supervision. Project participation is voluntary and subject to approval by the department head and the Cal Poly Corporation. Degree credit limited to two units. Maximum degree credit for EHS 210 and EHS 310 limited to four units. Credit/No Credit grading only. Prerequisite: EHS 210 or consent of instructor.

### **EHS 320 Horticultural Presentation Techniques (4)**

Computer assisted presentation applications for horticultural business. Exposure to various media essential to horticultural presentations. Expanded computer applications for plan, elevation, perspective drawings and photo imaging. Exposure to estimating, plant materials database and plant selection programs. Required field trip. 2 lectures, 2 laboratories. Prerequisite: EHS 127 or consent of instructor.

### **EHS 321 Residential Landscape Design (4)**

Advanced principles of landscape design for single-family residential properties. Design process form, and space composition emphasized. Project involvement includes actual client contact. Application of xeriscape concepts. Computer assisted design applications emphasized. Required field trips. 2 lectures, 2 laboratories. Prerequisite: EHS 231, EHS 232, EHS 301. Recommended: EHS 320, EHS 381.

### **EHS 324 Interior Plant Management (4)**

Plant materials used in the interior plantscape. Identification, production, utilization, placement. Interior plant specifics and maintenance. 3 lectures, 1 laboratory. Prerequisite: HCS 120, HCS 124 or consent of instructor, SS 121.

### **EHS 325 Floriculture Grades and Standards (3)**

Grades and standards for fresh flowers, and blooming and foliage plants. Score cards in evaluating florist crops. Comparative evaluation used to develop both verbal skills and appreciation of commercially grown floriculture crops. 1 activity, 2 laboratories. Prerequisite: HCS 120 or consent of instructor.

### **EHS 331 Landscape Contracting (4)**

Practices in supervising personnel and applying standard techniques in landscape construction. Cost finding and estimating for landscape trades. 3 lectures, 1 laboratory. Prerequisite: EHS 126, EHS 127.

### **EHS 332 Landscape Contracting (4)**

Practices in supervising personnel and applying standard techniques in landscape construction cost finding and estimating for landscape trades. Rules, regulations, and licensing laws, set forth by the State of California, governing landscape contractors. 3 lectures, 1 laboratory. Prerequisite: EHS 331.

### **EHS 335 Computer Applications for Landscape Horticulture (4)**

Computer assisted design, drafting and estimating advanced applications for landscape horticulture. In-depth study and extensive hands on exposure to various media programs essential to digital graphic landscape horticulture; CAD drawing/estimating, material databases, plant database programs and GIS. 2 lectures, 2 laboratories. Prerequisite: EHS 126; EHS 127; EHS 231; EHS 232; EHS 301 or EHS 321 or EHS 331 or consent of instructor.

**EHS 337 Park Planning and Management (4)**

Overview of the management and maintenance of private and public parks and recreational areas. Field trips required. 3 lectures, 1 laboratory. Prerequisite: Junior standing or consent of instructor.

**EHS 340 Principles of Greenhouse Environment (4)**

Analysis of problems and practices affecting the contemporary commercial horticulturist. Analysis and operation of greenhouses and related equipment stressing the effect of environment on plant growth. Field trip required. 3 lectures, 1 laboratory. Prerequisite: HCS 120, EHS 245, or consent of instructor. Students cannot receive degree credit in both CRSC 333 and EHS 340.

**EHS 341 Cut Flower Production (4)**

Production of cut flowers and other fresh florists' commodities in greenhouses and outdoors. Preparation and scheduling of such commodities for major markets. Field trip required. 3 lectures, 1 laboratory. Prerequisite: EHS 340 or consent of instructor.

**EHS 342 Potted Plant Production (4)**

Production of major commercial flowering potted plants in greenhouses and outdoors. Preparation and scheduling of potted flowering greenhouse crops for major markets. Field trip required. 3 lectures, 1 laboratory. Prerequisite: EHS 340 or consent of instructor.

**EHS 343 Turfgrass Management (4)**

Turfgrass species and uses. Principles of turfgrass physiology and communities under different environments. Overview of procedures and equipment for propagation, mowing, irrigation, fertilization, aerification, and pest control. 3 lectures, 1 laboratory. Prerequisite: HCS 120 or consent of instructor, EHS 123, SS 121.

**EHS 381 Native Plants for California Landscapes (4)**

Horticultural investigation of the California flora with emphasis on landscape use and potential. Plant recognition, identification, propagation and culture. Utilization of native plants in landscape design and habitat restoration. Field trips required. 3 lectures, 1 laboratory. Prerequisite: BOT 121, junior standing or consent of instructor.

**EHS 382 Restoration Horticulture (4)**

Role of horticulture in the successful implementation of restoration projects, including mitigation, revegetation, and erosion control. Practical application of restoration methods and guidelines for specific California plant communities including site-specific plant production. 3 lectures, 1 laboratory. Prerequisite: HCS 124, EHS 381, SS 121.

**EHS 402 Retailing Horticultural Products (4)**

Economics of operating and managing retail horticulture outlets. Location, selection, layout, and demographic studies. Personnel management, merchandising, advertising, pricing strategies and selling techniques, cooperative buying and industry contributions. 3 lectures, 1 laboratory. Field trip required. Prerequisite: HCS 120, EHS 128, BUS 271, junior standing, or consent of instructor. Recommended: BUS 488.

**EHS 421 Arboriculture (4)**

Care and management of large ornamental trees. Selection, planting, establishment and maintenance of specimen trees. Ropes and safety equipment required in tree maintenance. Cavity treatment, bracing and cabling, hazard identification, tree evaluation, and specialty power equipment operation. 3 lectures, 1 laboratory. Prerequisite: EHS 123, EHS 231, EHS 232, or consent of instructor.

**EHS 422 Advanced Arboriculture (2)**

Theory and practices utilized in the management of ornamental trees found in landscaped urban settings. Scheduling of cultural practices and safe usage of hand and power equipment, as specified by professional arborists, and other safety regulations. 2 activities. Prerequisite: EHS 421 or consent of instructor.

**EHS 424 Nursery Crop Production (4)**

History and overview of the nursery industry. Types of wholesale nurseries and their products. Plant production systems, scheduling, marketing. Emphasis on the wholesale nursery industry in the western U.S. Field trips

required. 3 lectures, 1 laboratory. Prerequisite: HCS 124, EHS 245, HCS 327, SS 221; or consent of instructor.

**EHS 425 Tissue Culture Propagation (3)**

Principles of tissue culture applied to the propagation of ornamental plants. Systems applicable to commercial crops, laboratory organization, media, and current research. 2 lectures, 1 laboratory. Prerequisite: HCS 124 and BIO 435 or HCS 410.

**EHS 433 Advanced Turfgrass Operations (4)**

Advanced maintenance and operation of turfgrass facilities. Systems of management, maintenance, business and finance. 3 lectures, 1 laboratory. Prerequisite: EHS 343, SS 221.

**EHS 434 Landscape Management (4)**

Maintenance procedures and operations. Operating a landscape management business. Estimating, scheduling, recordkeeping and implementation of landscape maintenance projects. Interior landscape maintenance. 3 lectures, 1 laboratory. Prerequisite: EHS 123, EHS 126, or consent of instructor.

**EHS 438 Teaching Methods in Environmental Horticulture (4)**

Use of horticulture as a context for teaching core academic subjects in science, mathematics, English and history/social science. Daily and unit lesson plans that adopt horticultural content, teaching methods and assessment for English language learners and students with special needs. Class demonstrations, analysis, assessment and reflection. 2 lectures, 2 activities. Prerequisite: Completion of General Education B2; EHS 230 or horticultural experience; AGED 202; junior standing; credential candidate or consent of instructor.

**EHS 581 Graduate Seminar in Ornamental Horticulture (3)**

Group study of current problems of the ornamental horticulture industry; current experimental and research findings as applied to production and management. Total credit limited to 9 units. 3 seminars. Prerequisite: Graduate standing.

**EHS 599 Thesis in Environmental Horticultural Science (1-9)**

Systematic research of a significant problem in environmental horticulture. Thesis will include problem identification, significance, methods, data analysis and conclusion. Students must enroll every quarter in which facilities are used or advisement is received. Degree credit limited to 6 units. Prerequisite: Graduate standing and consent of instructor.