

# Horticulture Technology A.A.S.

## - Landscape Design Option

### Program Description

Landscape design combines elements of art and science, teaching students how to create functional and aesthetically-pleasing outdoor spaces. Students acquire a working knowledge of design principles, theories of analysis and planning, and fundamentals of the design process. Contract preparation, client interaction, and materials and methods of construction are also integrated into the design program. Students are given the opportunity to apply their skills in hands-on design exercises working with selected projects in the community.

### Employment Information

Career opportunities exist for landscape designers in a variety of employment settings. Landscape design provides opportunities for self-employment as a design consultant, or in positions with design/build firms, landscape contractors, landscape nurseries and garden centers.

### Degree Awarded

Associate in Applied Science

### For More Information Contact:

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|                   |       |
|-------------------|-------|
| Student Name:     | _____ |
| CWID:             | _____ |
| Counselor:        | _____ |
| Catalog 2011-2012 |       |

| Technical Occupational Specialty   |           |   | 37 Credit Hours        | Date | Institution |
|--|-----------|---|------------------------|------|-------------|
| <input type="checkbox"/>   | BIOL 1404 | Plant Biology                               | 4                      |      |             |
| <input type="checkbox"/>   | HRT 1013  | Principles of Horticulture                  | 3                      |      |             |
| <input type="checkbox"/>   | HRT 1103  | Landscape Graphics I                        | 3                      |      |             |
| <input type="checkbox"/>   | HRT 2123  | Landscape Design Theory                     | 3                      |      |             |
| <input type="checkbox"/>   | HRT 2143  | Landscape Design Applications               | 3                      |      |             |
| <input type="checkbox"/>   | HRT 2232  | Seminar Horticulture Operations             | 2*                     |      |             |
| <input type="checkbox"/>   | HRT 2244  | Horticulture Practicum                      | 4*                     |      |             |
| <input type="checkbox"/>   | HRT 2313  | Deciduous Landscape Plants                  | 3                      |      |             |
| <input type="checkbox"/>   | HRT 2413  | Evergreen Landscape Plants                  | 3                      |      |             |
| <input type="checkbox"/>   | HRT 2423  | CAD Graphics for Landscape Design           | 3                      |      |             |
| <input type="checkbox"/> <i>Select a minimum of 6 credit hours from the following:</i> |           |   |                        |      |             |
| <input type="checkbox"/>   | HRT 1123  | Home Gardening-Fruits & Vegetables          |                        |      |             |
| <input type="checkbox"/>   | HRT 1133  | Landscape Graphics II                       |                        |      |             |
| <input type="checkbox"/>   | HRT 1153  | Beginning Floral Design                     |                        |      |             |
| <input type="checkbox"/>   | HRT 1163  | Bilingual Horticultural Communications      |                        |      |             |
| <input type="checkbox"/>   | HRT 2453  | Herbaceous Ornamental Plants                |                        |      |             |
| <input type="checkbox"/>   | HRT 2463  | Interior Plants                             |                        |      |             |
| <input type="checkbox"/>   | HRT 1423  | Landscape Bidding and Contracts             |                        |      |             |
| <input type="checkbox"/>   | HRT 1843  | Irrigation and Drainage Design              |                        |      |             |
| <input type="checkbox"/>   | HRT 2013  | Maintenance of Landscape Plants             |                        |      |             |
| <input type="checkbox"/>   | HRT 2023  | Horticulture Soil Science                   |                        |      |             |
| <input type="checkbox"/>   | HRT 2050  | Advanced Problems-Horticulture              |                        |      |             |
| <input type="checkbox"/>   | HRT 2113  | Turfgrass Management                        |                        |      |             |
| <input type="checkbox"/>   | HRT 2213  | Horticulture Marketing                      |                        |      |             |
| <input type="checkbox"/>   | HRT 2233  | Landscape Construction                      |                        |      |             |
| <input type="checkbox"/>   | HRT 2263  | Horticulture Pest Management                |                        |      |             |
| <input type="checkbox"/>   | HRT 2843  | Irrigation Installation and Troubleshooting |                        |      |             |
| <b>Support and Related Courses</b>   |           |   | <b>6 Credit Hours</b>  |      |             |
| <input type="checkbox"/>   | BUS 2003  | Small Business Management                   |                        |      |             |
| <input type="checkbox"/>   | <b>OR</b> |   | 3                      |      |             |
| <input type="checkbox"/>   | BUS       | Business Management Course*                 |                        |      |             |
| <input type="checkbox"/>   | CIS 1503  | Microcomputer Applications-Microsoft Office |                        |      |             |
| <input type="checkbox"/>   | <b>OR</b> |   | 3                      |      |             |
| <i>Select 3 credit hours from the following:</i>                                       |           |   |                        |      |             |
| <input type="checkbox"/>   | CIS 1113  | Computer Concepts with Applications         |                        |      |             |
| <input type="checkbox"/>   | ITD 1323  | Internet Fundamentals                       |                        |      |             |
| <b>General Education Requirements</b>  |           |   | <b>18 Credit Hours</b> |      |             |
| <input type="checkbox"/>   | ENGL 1113 | English Composition I                       | 3                      |      |             |
| <input type="checkbox"/>   | ENGL 2333 | Technical Report Writing                    | 3                      |      |             |
| <input type="checkbox"/>   | HIST 1483 | U.S. History to 1865                        |                        |      |             |
| <input type="checkbox"/>   | <b>OR</b> |   | 3                      |      |             |
| <input type="checkbox"/>   | HIST 1493 | U.S. History Since 1865                     |                        |      |             |
| <input type="checkbox"/>   | MATH 1413 | General College Math                        |                        |      |             |
| <input type="checkbox"/>   | <b>OR</b> |   | 3                      |      |             |
| <input type="checkbox"/>   | MATH 1513 | College Algebra                             |                        |      |             |
| <input type="checkbox"/>   | POLS 1113 | American Government                         | 3                      |      |             |
| <input type="checkbox"/>   | SPCH 1113 | Introduction to Speech Communications       | 3                      |      |             |
| <b>Total to Graduate</b>   |           |   | <b>61 Credit Hours</b> |      |             |

\*Department head approval required

## HORT TECH AAS-LANDSCAPE DESIGN OPTION COURSE DESCRIPTIONS

### **BIOL 1404 PLANT BIOLOGY (L, N)**

Survey of the plant phyla, structure and function of plant organs, water relations, translocation, reproduction, growth and development. Emphasis on the importance of plants to humans. Lab: two hours per week. Prerequisites: [R] [Sci] MATH 0104

### **BUS 2003 SMALL BUSINESS MANAGEMENT**

Focuses on the experiences and problems faced by those who go into business for themselves. Looks at problems of organizing and managing individually owned businesses including location, securing capital, records, personnel and sales promotion. Prerequisite: MGMT 2103.

### **\*CIS 1113 COMPUTER CONCEPTS WITH APPLICATIONS**

Provides students with an introduction to concepts and applications of the personal computer in business. Topics include spreadsheets, databases, word processing, ethics, vocabulary, Internet skills and file system management. Theory and hands-on computer instruction is included. This course is intended for students with existing computer skills. Prerequisite: READ 0033 or [R].

### **\*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 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. (sp)

### **HRT 1133 LANDSCAPE GRAPHICS II**

Advanced drafting and illustration techniques for landscape designs, focusing on presentation drawings in both black and white and color formats. Application of graphic techniques to more complex plans, drawings and programs. Introduction to electronic media and blending of electronic and hand drawn graphics. Lab: three hours per week. Prerequisite: 1103

### **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 1423 LANDSCAPE BIDDING AND 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 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 2050 (2051-2056) ADVANCED PROBLEMS-HORTICULTURE**

One to six credits, six credits maximum. A study of applied problems that are of particular interest to horticulture majors. Prerequisite: consent of department head.

### **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)

### **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.(f)

### **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 .(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. (sp)

### **HRT 2213 HORTICULTURE MARKETING**

An in-depth study of marketing principles and how marketing applies to the horticulture industry. Includes location, facilities, sales methods and price determination. Services, merchandising, marketing and advertising techniques, as well as supervisory and personnel responsibilities are also offered. (f)

### **HRT 2232 SEMINAR IN HORTICULTURE OCCUPATIONS**

To acquaint the student with the variety of job opportunities and placement in the horticulture industry. Skills used in resume writing, public speaking and project presentations will be covered. Development of skills necessary at the supervisory level including leadership, motivation of employees, communication, and recruiting and retaining good employees will be discussed. Guest speakers will address topics within the horticulture industry. Prerequisite: consent of department head.

### **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 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 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.

### **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)

### **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 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 yours per week. Lab: three hours per week. Prerequisite: HRT 1843.(sp)

### **\*ITD 1323 INTERNET FUNDAMENTALS**

Introduction to the worldwide computer network. Course uses a hands-on approach to teach students the history and capabilities of the Internet. Students learn the resources available via the World Wide Web and searching capabilities. Prerequisites: placement test or CIS 1003.