

## Definition

The courses offered are designed to prepare students for occupations in either the landscape or nursery business.

## Staff

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### Division:

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### Faculty:

*Vacant*

### Adjunct Faculty:

	V.M.
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## Program Description

The two-year certificate program is designed to prepare students for occupations in a field of horticulture such as landscape construction, landscape maintenance, and nursery operations. Completion of this program is one of the first steps toward obtaining a landscape contractor's license.

Students enrolled in the Park and Landscape Management certificate program receive "hands-on" experience in all phases of landscape construction. The program also includes computer-aided instruction.

Students must receive a minimum grade of "C" or better in all required core courses and the specific courses listed as program electives in order to qualify for the degree or certificate.

## Career Options

Grounds Maintenance	Landscape Contractor
Landscape Architect	Landscape Designer
Landscape Construction Worker	Landscape Gardener
	Nursery Worker

(Careers may require education beyond the two-year college level.)

## Program Learning Outcomes

### Environmental Horticulture

1. Identify, install and maintain various fruit trees that grow in the Antelope Valley.
2. Identify and create a method to legally control weeds, diseases, vertebrate, and insect pests in a California Landscape.
3. Determine a method to propagate and develop the skills to propagate various indoor and outdoor plants.
4. Create a functional landscape plan applying the principles, client needs, and elements of design.
5. Determine the best method to install and maintain a landscape according to the needs of the plant, landscape situation and to have the skills need to install and maintain a landscape.
6. Identify and select plants used in California landscapes.
7. Identify soil problems and determine a plan to maintain or correct the soil problem.
8. Demonstrate the understanding of plant anatomy and physiology.

9. Plan, design and construct wood, fencing and electrical features in a landscape.

### Landscape Construction

1. Identify, install and maintain various fruit trees that grow in the Antelope Valley.
2. Identify and create a method to legally control weeds, diseases, vertebrate, and insects pest in a California Landscape.
3. Determine a method to propagate and develop the skills to propagate various indoor and outdoor plants.
4. Create a functional landscape plan applying the principles, client needs, and elements of design.
5. Determine the best method to install and maintain a landscape according to the needs of the plant, landscape situation and to have the skills need to install and maintain a landscape.
6. Identify and select plants used in California landscapes.
7. Identify soil problems and determine a plan to maintain or correct the soil problem.
8. Demonstrate the understanding of plant anatomy and physiology.
9. Plan, design and construct wood, fencing and electrical features in a Landscape.
10. Plan, design and construct concrete, brick or block features in a Landscape.
11. Plan, design, construct and maintain various landscape irrigation systems.
12. Demonstrate an understanding of Federal, State and local contractor licenses, laws, regulations and permits pertaining to landscape businesses.
13. Use, read and interpret and landscape plans and specifications.

### Ground Maintenance

1. Determine a method to propagate and develop the skills to propagate various indoor and outdoor plants.
2. Determine the best method to install and maintain a landscape according to the needs of the plant, landscape situation and to have the skills needed to install and maintain a landscape.

## Certificate Programs

### Environmental Horticulture

#### Required Courses (32 units):

	units
AGRI 100, Fruit and Nut Production	3
AGRI 102, Plant Pest Control	3
AGRI 104, Nursery Practices	3
AGRI 110, Basic Landscape Design	2
AGRI 112, Plant and Landscape Maintenance	2
AGRI 130, Environmental Gardening	2
AGRI 132, Turf and Landscape Maintenance	2
AGRI 134, Plant Identification I	3
AGRI 212, Interior Plantscape	2
AGRI 230, Soils and Plant Nutrition	3
AGRI 234, Plant Identification II	3
BIOL 103, Introduction to Botany	4

**Total 32**

### Landscape Construction

#### Required Courses (52 units):

	units
AGRI 100, Fruit and Nut Production	3
AGRI 102, Plant Pest Control	3
AGRI 104, Nursery Practices	3
AGRI 110, Basic Landscape Design	2
AGRI 112, Plant and Landscape Maintenance	2
AGRI 130, Environmental Gardening	2
AGRI 132, Turf and Landscape Maintenance	2

AGRI 134, Plant Identification I	3
AGRI 153, Landscape Construction - Concrete & Masonry	3
AGRI 155, Landscape Construction - Wood & Lighting	3
AGRI 210, Advanced Landscape Design	3
AGRI 212, Interior Plantscape	2
AGRI 220, Landscape Irrigation	3
AGRI 230, Soil and Plant Nutrition	3
AGRI 234, Plant Identification II	3
AGRI 250, Landscape Management	2
BIOL 103, Introduction to Botany	4
BUS 111, Business English	3
MGT 201, Small Business Mgt.	3
<b>Total</b>	<b>52</b>

For a recommended plan of study, please refer to the Associate Degree plan minus the general education requirements.

### Locally Approved Certificate Grounds Maintenance

<b>Required Courses (9 units):</b>	<b>units</b>
AGRI 104, Nursery Practices	3
AGRI 112, Plant and Landscape Maintenance	2
AGRI 130, Environmental Gardening	2
AGRI 132, Turf and Landscape Maintenance	2
<b>Total</b>	<b>9</b>

### Associate Degree

#### Environmental Horticulture

The requirements for an associate degree in Environmental Horticulture may be satisfied by completing 31 units of required courses, 21 units of general education requirements, and sufficient elective credits to total 60 units. (See Graduation/Associate Degree Requirements.)

Students who complete the associate degree have enhanced employability in the field of Environmental Horticulture, including nursery sales, landscape design, landscape technician, city and county park's worker and other similar career fields. They have enhanced promotional opportunities into supervisory and management positions as they gain experience with various agencies. The associate degree will also provide students with a broad range of knowledge with which to evaluate and appreciate the physical environment, the culture, and the society in which they live and with the ability to think and communicate clearly and effectively.

#### *Recommended Plan of Study*

<b>First Semester (Fall)</b>	<b>units</b>
AGRI 100, Fruit and Nut Production	3
AGRI 102, Plant Pest Control	3
AGRI 104, Nursery Practices	3
AGRI 110, Basic Landscape Design	2
AGRI 112, Plant and Landscape Maintenance	2
GE requirement Area D1	3
<b>Total</b>	<b>16</b>

#### **Second Semester (Spring)**

AGRI 130, Environmental Gardening	2
AGRI 132, Turf and Landscape Maintenance	2
AGRI 134, Plant Identification I	3
BIOL 103, Introduction to Botany	4
GE requirement Area D2	3
<b>Total</b>	<b>14</b>

#### **Third Semester (Fall)**

AGRI 212, Interior Plantscape	2
GE requirement Area B	3
GE requirement Area E	3
GE requirement Area F	3
Elective	3
<b>Total</b>	<b>14</b>

#### **Fourth Semester (Spring)**

AGRI 230, Soils and Plant Nutrition	3
AGRI 234, Plant Identification II	3
GE requirement Area C	3
Electives	8
<b>Total</b>	<b>17</b>

**Degree Total 60**

*Students may begin the program at any point in the degree plan.*

### Landscape Construction

The requirements for an associate degree in Landscape Construction may be satisfied by completing 51 units of required courses, 21 units of general education requirements, and sufficient elective credits to total 69 units. (See Graduation/Associate Degree Requirements.)

Students who complete the associate degree have enhanced employability in the field of Landscape Construction with emphasis in obtaining a Contractor's License, other occupational careers including nursery sales, landscape design, landscape technicians, city and county park's worker and other similar career fields. They have enhanced promotional opportunities into supervisory and management positions as they gain experience with various agencies. The associate degree will also provide students with a broad range of knowledge with which to evaluate and appreciate the physical environment, the culture, and the society in which they live and with the ability to think and communicate clearly and effectively.

#### *Recommended Plan of Study*

<b>First Semester (Fall)</b>	<b>units</b>
AGRI 100, Fruit and Nut Production	3
AGRI 102, Plant Pest Control	3
AGRI 104, Nursery Practices	3
AGRI 110, Basic Landscape Design	2
AGRI 112, Plant and Landscape Maintenance	2
AGRI 130, Environmental Gardening	2
GE requirement Area D1	3
<b>Total</b>	<b>18</b>

#### **Second Semester (Spring)**

AGRI 132, Turf and Landscape Maintenance	2
AGRI 134, Plant Identification I	3
AGRI 153, Landscape Construction - Concrete & Masonry	3
BIOL 103, Introduction to Botany	4
GE requirement Area D2	3
<b>Total</b>	<b>15</b>

#### **Summer Semester**

GE requirement Area B	3
GE requirement Area E	3
<b>Total</b>	<b>6</b>

**Third Semester (Fall)**

AGRI 155, Landscape Construction - Wood & Lighting	3
AGRI 210, Advanced Landscape Design	3
AGRI 212, Interior Plantscape	2
AGRI 220, Landscape Irrigation	3
BUS 111, Business English	3
GE requirement Area F	3
<b>Total</b>	<b>17</b>

**Fourth Semester (Spring)**

AGRI 230, Soil and Plant Nutrition	3
AGRI 234, Plant Identification II	3
AGRI 250, Landscape Management	2
MGT 201, Small Business Mgt.	3
GE requirement Area C	3
<b>Total</b>	<b>14</b>
<b>Degree Total</b>	<b>69</b>

*Students may begin the program at any point in the degree plan.*

*Semester order for classes and time to complete may vary for night students.*

**Transfer**

A bachelor's degree in Landscape Architecture is available at California Polytechnic State University, Pomona and California Polytechnic State University, San Luis Obispo, and California State University, Fresno. Check the schools' catalogs and consult with a counselor regarding transfer requirements.

A bachelor's degree in Ornamental Horticulture is available from California Polytechnic State University, Pomona and California Polytechnic State University, San Luis Obispo.

**Prerequisite Completion**

All prerequisite courses must be completed with a satisfactory grade in order to enroll in the next course. According to Title 5, Section 55200(d), a satisfactory grade is a grade of "A," "B," "C" or "P". Classes in which the Pass/No Pass option is available are indicated with an asterisk (\*) before the course title. See "Pass/No Pass Option" in the catalog for full explanation.

<b>Agriculture/Park and Landscape Management Courses</b>
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**AGRI 100 \*FRUIT AND NUT PRODUCTION**

*3 units*

*5 hours weekly [2 lecture, 3 lab]*

This course covers the botany, taxonomy, and development of major fruit, vine, and nut crops in California. Variety selection, production practices including site selection establishment, fertilization, pollination, irrigation, harvest, storage, processing, marketing, pest management and pruning are explored in this course. (CSU, UC, AVC)

**AGRI 102 \*PLANT PEST CONTROL**

*3 units*

*5 hours weekly [2 lecture, 3 lab]*

Focuses on the exploration, identification, and control of major horticultural pests, including insects, weeds, and diseases. The impact of pests on commercial nursery crops and the landscape is also discussed. Integrated pest management including cultural, biological, mechanical/physical and chemical control methods is emphasized. Course is designed to assist students in preparing for California licensing examinations in pest management. (CSU, AVC)

**AGRI 104 \*NURSERY PRACTICES**

*3 units*

*5 hours weekly [2 lecture, 3 lab]*

Course involves plant propagation and production practices with emphasis on nursery operations including sexual and asexual reproduction, planting, transplanting, fertilizing, plant pest and disease control, structures and site layout. Preparation and use of propagating and planting mediums. Use and maintenance of common tools and equipment. Regulations pertaining to plant production will be included. (CSU, AVC)

**AGRI 110 \*BASIC LANDSCAPE DESIGN**

*2 units*

*3 hours weekly [1.5 lecture, 1.5 lab]*

This course involves the study and implementation of the art and science of landscape design, including principles of design and the design process. Project emphasis is placed upon residential and small commercial sites. A home landscape design project is required. (CSU, UC, AVC)

**AGRI 112 \*PLANT AND LANDSCAPE MAINTENANCE**

*2 units*

*4 hours weekly [1 lecture, 3 lab]*

Skills used in a typical landscape maintenance program with emphasis on the plants in the landscape, including, but not limited to, planting, pruning and care of shrubs and trees. Care of turf areas will also be covered. (CSU, AVC)

**AGRI 130 \*ENVIRONMENTAL GARDENING**

*2 units*

*3 hours weekly [1.5 lecture, 1.5 lab]*

A general course in environmental horticulture with emphasis on nursery operations, landscaping and turf management. Topics include basic botany, propagation, soils, fertilization, pest management, planting, container gardening, vegetable and fruit gardening, houseplants, turf grass installation and care. (CSU, AVC)

**AGRI 132 \*TURF AND LANDSCAPE MAINTENANCE**

*2 units*

*4 hours weekly [1 lecture, 3 lab]*

Skills used in a typical landscape maintenance program with emphasis on turf and ground covers in the landscape, including, but not limited to, planting and care of turf. Care and pruning of shrubs and trees will also be covered. (CSU, AVC)

**AGRI 134 \*PLANT IDENTIFICATION I***3 units**5 hours weekly [2 lecture, 3 lab]*

This course involves identification, growth habits, culture and ornamental use of landscape plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen & Garden Centers (CANGC) and Professional Landcare Network (PLANET) Certification Tests Plant Lists. Approximately 200 plants will be covered. A leaf collection will be required. The plants covered in this class differ from AGRI 234. (C-ID: AG-EH 108L) (CSU, UC, AVC)

**AGRI 153 \*LANDSCAPE CONSTRUCTION - CONCRETE AND MASONRY***3 units**5 hours weekly [2 lecture, 3 lab]*

Construction and repair of concrete and masonry projects using materials and methods used in landscape construction. Discussion, as well as demonstrated manual skills needed to construct various concrete and masonry projects in a landscape, including ponds and waterfalls. (CSU, AVC)

**AGRI 155 \*LANDSCAPE CONSTRUCTION - WOOD AND LIGHTING***3 units**5 hours weekly [2 lecture, 3 lab]*

Construction and repair of wood, lighting and drainage projects using materials and methods used in landscape construction. Discussion, as well as demonstrated manual skills needed to construct various wood, lighting, and drainage projects in a landscape. (CSU, AVC)

**AGRI 199 \*OCCUPATIONAL WORK EXPERIENCE***1-8 units**hours vary*

**Prerequisite:** To participate in work experience, students must have a job or internship which is either paid or voluntary and have the approval of the supervisor and instructor supervising work experience in the specific subject area. **PRIOR TO ENROLLING**, students must attend a scheduled orientation or meet individually with the supervising instructor for an individual orientation.

Occupational Work Experience Education is supervised employment designed to provide students a realistic learning experience through work. The ultimate goal is to teach students those skills and attitudes that will equip them to function and adapt as an employee in a variety of situations and jobs. Occupational Work Experience Education is supervised employment extending classroom-based occupational learning at an on-the-job learning station related to the student's educational major or occupational goal. Credit may be accrued at the rate of one to eight units per semester. For the satisfactory completion of all types of Cooperative Work Experience Education (WE 197 and WE 199), students may earn up to a total of sixteen semester credit hours. (CSU, AVC) **(R3)**

**AGRI 210 \*ADVANCED LANDSCAPE DESIGN***3 units**7 hours weekly [1 lecture, 6 lab]*

This advanced course involves the implementation of landscape design, including principles of design, the design process, drafting, graphics and presentation methods. Project emphasis is placed upon residential and small commercial sites. Course includes the use of computer landscape design programs. (CSU, AVC)

**AGRI 212 \*INTERIOR PLANTSCAPE***2 units**3 hours weekly [1.5 lecture, 1.5 lab]*

Study of common plants used in interior plantscape. Will discuss how to use plants in the home or office, what plants are best suited, pests and diseases, and the environment needed to keep the plants alive. (CSU, AVC)

**AGRI 220 \*LANDSCAPE IRRIGATION***3 units**5 hours weekly [2 lecture, 3 lab]*

This course prepares students to design, install, and maintain a water-efficient landscape irrigation system. Topics include water supply, basic hydraulics, component identification and terminology, system layout, pipe sizing types of heads, valves, controllers and practices related to appropriate horticulture for California. (CSU, AVC)

**AGRI 230 \*SOILS AND PLANT NUTRITION***3 units**5 hours weekly [2 lecture, 3 lab]*

This course involves a study of soil derivation, classification and characteristics. Soil use and management including erosion, moisture retention, structure, cultivation, organic matter, and microbiology. Laboratory topics include soil type, classification, soil reaction, soil fertility, and physical properties of soil. (CSU, UC, AVC)

**AGRI 234 \*PLANT IDENTIFICATION II***3 units**5 hours weekly [2 lecture, 3 lab]*

This course involves identification, growth habits, culture, and ornamental use of landscape plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurserymen & Garden Centers (CANGC) and Professional Landcare Network (PLANET) Certification Tests Plant Lists. Approximately 200 plants will be covered. A leaf collection will be required. The plants covered in this class differ from AGRI 134. (C-ID AG-EH 112L) (CSU, UC, AVC)

**AGRI 250 \*LANDSCAPE MANAGEMENT***2 units**4 hours weekly [1 lecture, 3 lab]*

This course is an introduction to professional landscape management practices, including bidding, estimating, contracts and various business management practices. (CSU, AVC)