

Las Positas College  
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### Course Outline for HORT 55

### HORTICULTURE MGMT & OPERATIONS

Effective: Fall 2004

#### I. CATALOG DESCRIPTION:

HORT 55 — HORTICULTURE MGMT & OPERATIONS — 3.00 units

Explores many horticulture specializations including management and operations of retail and wholesale nurseries, greenhouse growers, specialized growers of trees, shrubs, flowers, hydroponics growers, vegetable growers, wholesale and retail floristry businesses, other related businesses, and botanical gardens. Emphasis on plant propagation, propagation structures, greenhouses, nursery and floral business management and operations. Employment opportunities in the horticulture industry.

2.50 Units Lecture 0.50 Units Lab

#### Prerequisite

HORT 50 - Introduction to Horticulture  
with a minimum grade of C

#### Grading Methods:

Letter or P/NP

#### Discipline:

	<u>MIN</u>
<b>Lecture Hours:</b>	45.00
<b>Lab Hours:</b>	27.00
<b>Total Hours:</b>	72.00

#### II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: 1

#### III. PREREQUISITE AND/OR ADVISORY SKILLS:

**Before entering the course a student should be able to:**

A. HORT50

#### IV. MEASURABLE OBJECTIVES:

**Upon completion of this course, the student should be able to:**

- A. communicate effectively with others in the horticulture industry;
- B. recognize the various fields of specialization within the horticulture industry;
- C. describe the various specialties within the nursery industry;
- D. discuss the local botanic gardens, historic gardens and other locations of horticulture interest and significance;
- E. plan, layout, plant and maintain a small flower and vegetable garden;
- F. propagate various types of plants for garden use;
- G. identify plant pest problems;
- H. recognize various types of plant growth and health problems;
- I. maintain and care for garden and landscape plants using professional standards;
- J. apply proper principles for healthy plant growth and development.

#### V. CONTENT:

- A. The horticulture industry
  1. Wholesale and retail nursery business
  2. Greenhouse growers and field growers
  3. Wholesale and retail floristry
  4. Related areas to the horticulture industry
  5. Business and employment opportunities
- B. Management and operations
  1. Promotion and sales
  2. Marketing and merchandising
  3. Operating a profitable business
  4. Business operating costs
  5. Developing a business plan
- C. Growing and propagating structures
  1. Greenhouse design, construction, and operation

2. Cold frames and hot beds
3. Design and construction of greenhouse heating and cooling systems
4. Greenhouse environmental management
- D. Plant propagation and production
  1. Types, methods, techniques, and application of asexual and sexual propagation
  2. Seed propagation, treatments, and environmental requirements
  3. Propagation by use of cuttings, treatments, and environmental requirements
  4. Budding, grafting, air layering, and division propagation techniques and requirements
  5. Propagating containers, materials, hormones, media, and application
  6. Plant production planning and scheduling
- E. Plant growth and development
  1. Plant parts and their function
  2. Photosynthesis, photoperiodism, and phototropism
  3. Plant production management and plant care
  4. Production of marketable plants and plant products
- F. Vegetable and flower production
  1. Propagation, production, and growing of vegetables and flowers
  2. Methods and applications of container growing
  3. Gardening with vegetables and flowers
- G. Plant production management
  1. Soil, soil amendments, and soilless growing and rooting mediums
  2. Irrigation systems, water application related to plant production and water management
  3. Fertilization, plant nutrients, fertilizer selection, and application
  4. Repotting, transplanting, and planting
  5. Pruning container and small field-grown plants
  6. Staking and training young plants
  7. Composting
- H. Plant pest management and control
  1. Preventative measures
  2. Weeds, insects, diseases, and their control
  3. Non-chemical control alternatives
  4. Integrated pest management

#### VI. METHODS OF INSTRUCTION:

- A. **Lecture** -
- B. **Discussion** -
- C. Media presentation
- D. **Field Trips** - 1. Nurseries 2. Growers 3. Greenhouse operations and botanical gardens
- E. Resource speakers: 1. Management 2. Owner-operators from various areas within the horticulture industry
- F. **Demonstration** -

#### VII. TYPICAL ASSIGNMENTS:

- A. Weekly reading assignments in text
- B. Field trips to specified locations
- C. Hands-on field practice
- D. Laboratory and field projects

#### VIII. EVALUATION:

- A. **Methods**
- B. **Frequency**
  1. Written exams equally spaced during the semester
  2. Quizzes at instructor's discretion
  3. Required reports

#### IX. TYPICAL TEXTS:

1. H. Hartmann, D. Kester, F. Davis Jr., R. Geneve *Plant Propagation*. 6th ed., Prentice Hall, 1997.

#### X. OTHER MATERIALS REQUIRED OF STUDENTS: