

**SUSAG 116 Course Outline as of Fall 2015****CATALOG INFORMATION**

Dept and Nbr: SUSAG 116 Title: ORGANIC APPLE PRODUCTION

Full Title: Organic Apple Production

Last Reviewed: 9/13/2021

| Units   |      | Course Hours per Week |      | Nbr of Weeks | Course Hours Total |       |
|---------|------|-----------------------|------|--------------|--------------------|-------|
| Maximum | 1.00 | Lecture Scheduled     | 1.00 | 17.5         | Lecture Scheduled  | 17.50 |
| Minimum | 1.00 | Lab Scheduled         | 0.75 | 4            | Lab Scheduled      | 13.13 |
|         |      | Contact DHR           | 0    |              | Contact DHR        | 0     |
|         |      | Contact Total         | 1.75 |              | Contact Total      | 30.63 |
|         |      | Non-contact DHR       | 0    |              | Non-contact DHR    | 0     |

Total Out of Class Hours: 35.00

Total Student Learning Hours: 65.63

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

This course emphasizes organic apple production practices and is intended for current or potential apple producers. Emphasizes available and effective methods in commercial or small-scale organic contexts.

**Prerequisites/Corequisites:****Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:****Schedule of Classes Information:**

Description: This course emphasizes organic apple production practices and is intended for current or potential apple producers. Emphasizes available and effective methods in commercial or small-scale organic contexts. (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

|                      |                      |            |           |
|----------------------|----------------------|------------|-----------|
| <b>AS Degree:</b>    | <b>Area</b>          | Effective: | Inactive: |
| <b>CSU GE:</b>       | <b>Transfer Area</b> | Effective: | Inactive: |
| <b>IGETC:</b>        | <b>Transfer Area</b> | Effective: | Inactive: |
| <b>CSU Transfer:</b> |                      | Effective: | Inactive: |
| <b>UC Transfer:</b>  |                      | Effective: | Inactive: |

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Establish an orchard so as to ensure optimal production.
2. Select appropriate apple varieties and rootstocks for planting.
3. Monitor an orchard for pests and utilize appropriate pest management control approaches.
4. Manage harvest and post-harvest operations.

### **Objectives:**

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

1. Comply with state and federal regulations pertaining to the production of organic apples.
2. Establish an orchard so as to ensure optimal production.
3. Select appropriate apple varieties and rootstocks for planting.
4. Manage the orchard floor to control weed competition and provide appropriate access.
5. List common diseases of apples and describe the symptoms and control methods.
6. List the common physiological disorders of apples and describe the symptoms and control methods.
7. Monitor an orchard for pests and utilize appropriate pest management control approaches.
8. Manage harvest and post-harvest operations.
9. Prune and train apple trees for optimal production.
10. Install and manage an irrigation system.
11. Discuss marketing considerations for organically grown apples.

### **Topics and Scope:**

- I. Overview of the Organic Apple Industry
  - A. Trends in organic production and markets
  - B. Supply and price response
  - C. Regulation of California organic apple production methods, including certification
- II. Orchard Management

- A. Orchard culture
  - 1. Site selection
  - 2. Land preparation
  - 3. Planting
  - 4. Rootstock selection
  - 5. Variety selection
  - 6. Tree nutrition and fertilization
  - 7. Fruit thinning
  - 8. Pruning
  - 9. Irrigation timing
- B. Orchard floor management
  - 1. Weed control
  - 2. Cover crop selection and management
- C. Irrigation system
  - 1. Installation
  - 2. Management
- D. Equipment requirements

### III. Disease and Pest Management

- A. Apple diseases
  - 1. Major apple diseases
    - a. apple scab
    - b. fire blight
  - 2. Minor apples diseases
    - a. powdery mildew
    - b. phytophthora root and crown rot
    - c. oat root fungus
    - d. dematophora root rot
    - e. sappy bark
    - f. southern blight
    - g. European canker
    - h. post-harvest rots
    - i. viruses
- B. Physiological disorders
  - 1. Major: bitter pit
  - 2. Minor
    - a. water core
    - b. apple measles
- C. Insect and mite management
  - 1. Major
    - a. codling moth
    - b. aphids
  - 2. Minor
    - a. mites
    - b. tentiform leafminer
    - c. leafrollers
- D. Vertebrate pest management
  - 1. Deer
  - 2. Gophers
  - 3. Rabbits
  - 4. Birds

### IV. Harvest and Post-harvest Operations

- A. Pre-harvest factors

- B. Harvesting and packing
- C. Apple storage
- D. Sanitation during processing of organic apples

#### V. Marketing Considerations

- A. Quality
- B. Demand
- C. Marketing channels
- D. Promotion

#### VI. Economic Performance

- A. Yield
- B. Labor management
- C. Estimated costs and expected returns for organic apples

### Assignment:

Assignments may include:

1. Develop a farm plan, including irrigation issues, fertilization, equipment needs, and marketing strategy (3-5 pages).
2. Lab: activities assigned according to the season in Shone Farm apple orchard e.g., pruning, monitoring for orchard pests, weed control methods for orchard floor.
3. Assigned reading totaling approximately 60 - 100 pages.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Farm plan.

Writing  
30 - 50%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab activities.

Skill Demonstrations  
30 - 50%

**Exams:** All forms of formal testing, other than skill performance exams.

None

Exams  
0 - 0%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Participation/attendance

Other Category  
10 - 20%

**Representative Textbooks and Materials:**

Organic Apple Production Manual. University of California Agriculture and Natural Resources Publication 3403. Regents of the University of California, 2000. (Classic)

Instructor prepared materials.