

SUAG 109 Course Outline as of Fall 2025**CATALOG INFORMATION**

Dept and Nbr: SUAG 109 Title: ORGANIC CROP PLANNING
 Full Title: Organic Crop Planning and Production
 Last Reviewed: 11/25/2024

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	3.00	8	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 210.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

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

Also Listed As:

Formerly: SUSAG 109

Catalog Description:

Students in this course will delve into a hands-on practicum in organic farming. This course covers planning and production practices for market farms. Topics include: seasonal crop selection, planting procedures, cultural practices, harvesting and post harvest for organic production of vegetable and grain crops in small commercial operations. Both manual and machine-powered management techniques will be discussed. Includes hands-on management of greenhouse starts and farm plots at Shone Farm.

Prerequisites/Corequisites:**Recommended Preparation:**

Course Completion or Current Enrollment in AGRI 20 and AGRI 60

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

Description: Students in this course will delve into a hands-on practicum in organic farming. This course covers planning and production practices for market farms. Topics include: seasonal crop selection, planting procedures, cultural practices, harvesting and post harvest for organic

production of vegetable and grain crops in small commercial operations. Both manual and machine-powered management techniques will be discussed. Includes hands-on management of greenhouse starts and farm plots at Shone Farm. (Grade Only)

Prerequisites/Corequisites:

Recommended: Course Completion or Current Enrollment in AGRI 20 and AGRI 60

Limits on Enrollment:

Transfer Credit:

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

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:

IGETC:	Transfer Area	Effective:	Inactive:
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CSU Transfer:	Effective:	Inactive:
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UC Transfer:	Effective:	Inactive:
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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. Plan and manage a small commercial farm operation.
2. Evaluate farm marketing channels appropriate to Sonoma County.
3. Select appropriate crops for market production in Sonoma County.
4. Generate a crop plan based on season and market needs.
5. Determine optimal harvest time for a given crop.
6. Establish and maintain organic farm plots from planting to harvest.

Objectives:

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

1. Plan and manage a small commercial farm operation.
2. Evaluate marketing channels appropriate to Sonoma County.
3. Generate a crop plan based on season and market needs.
4. Interpret soil test results and recommend a plan for appropriate soil fertility management.
5. Design a crop rotation plan.
6. Determine appropriate cover crops for a given season.
7. Determine appropriate plant spacing and planting arrangements for optimal crop production.
8. Determine optimal harvest time for a given crop.
9. Determine crop density based on square footage of space available.
10. Select appropriate crops and design a crop plan based on season and market needs.
11. Compare and contrast the benefits of planting from seed versus transplants.
12. Utilize best practices for producing seedlings for transplanting.
13. Evaluate a site for suitability as a market farm.

14. Prepare garden beds for planting using biointensive methods.
15. Plant and maintain crops in plots based on crop plan.
16. Perform necessary cultural management practices throughout growing season.
17. Identify pest pressures and apply appropriate pest management treatments.
18. Practice appropriate harvesting techniques.
19. Discuss effective storage requirements to maintain crop quality.

Topics and Scope:

I. Evaluation of Produce Marketing Channels for Region - Direct Market versus Wholesale Options

II. Crop Selection

- A. Criteria for evaluating and comparing vegetable varieties
- B. Key information from seed catalogues used in a crop plan

III. Crop Planning

- A. Sales projections and harvest plans
- B. Planting plan
- C. Greenhouse plan
- D. Field map and block layout
- E. Field operations calendar
- F. Record keeping and profitability

IV. Growing Seedlings

- A. Best practices for greenhouse and nursery production of organic vegetable starts
- B. Transplanting vs. direct seeding of crops
- C. Best practices for planting transplanted crops in field
- D. Techniques and equipment for direct seeding of vegetable crops
- E. Mechanical transplanter

V. Site Evaluation for Market Farming

- A. Using a site evaluation checklist
- B. Design and placement of farm components
- C. Zone and sector planning from permaculture design

VI. Principles of Crop Rotations

- A. Crop plant families
- B. Heavy feeding and light feeding crops
- C. Principles of rotation design

VII. Soil Management for Organic Farming

- A. Soil nutrient tests
- B. Organic soil amendments
- C. Cover crop selection and use in market farming
- D. Reduced tillage methods for market farming

VIII. BioIntensive Farming Practices

- A. Permanent raised beds
- B. Broad forks
- C. Compost application
- D. Intensive plant spacing

IX. Drip Irrigation Systems

X. Weed management

- A. Hand tools for cultivating weeds
- B. Wheel hoe
- C. Occultation

XI. Walk-Behind Tractor

- A. Function of different implements

- B. Basic operations for market farming
- XII. Tools for Larger Scale Vegetable Farming
 - A. Tractor operations to prepare for spring planting
 - B. Tractor implements for vegetable farming
 - C. Tillage and reduced tillage tools
 - D. Weeding and cultivation tools
- XII. Harvesting of Crops
 - A. Harvesting tools
 - B. Optimal harvest time for specific crops
 - C. Harvest techniques specific to particular crops
 - D. Storage conditions for vegetable crops
- XIV. Case Study of Successful Market Farms
 - A. The Market Gardener
 - B. Farmer to Farmer podcast
 - C. Guest speakers on crop planning and produce sales from successful Sonoma county farms

All topics are covered in the lecture and lab portions of the course.

Assignment:

Lecture-Related Assignments:

1. Reading, 15 - 20 pages per week
2. Create a crop production plan
3. Design a crop map
4. Written review of podcast or video
5. Crop plan report

Lab-Related Assignments:

1. Weekly crop planning exercises and calculations
2. Prepare plots for planting
3. Field skills demonstration(s) (1 - 6)
4. Crop plan project and presentation
5. Lab write up

Lecture & Lab-Related Assignments:

1. Quiz(zes) (0-4)
2. Exam(s) (1-2)

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.

Written crop plan report; podcast/video review, lab write-up	Writing 20 - 30%
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Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Production plan, crop map, weekly planning exercises	Problem solving 20 - 40%
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Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Field skills demonstration(s), prepare plots for planting

Skill Demonstrations
20 - 30%

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

Quiz(zes) and Exam(s)

Exams
10 - 20%

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

Crop plan project and presentation, class participation

Other Category
10 - 20%

Representative Textbooks and Materials:

The Market Gardener: A Successful Grower's Handbook for Small-Scale Organic Farming. Fortier, Jean-Martin. New Society Publishers. 2014. (classic).

Organic Vegetable Production Manual. McGiffen Jr., Milton. University of California, Agriculture and Natural Resources Publication #3509. 2012. (classic).

Crop Planning for Organic Vegetable Growers. Theriault, Frederic and Brisebois, Daniel. Canadian Organic Growers, Inc. 2010. (classic).

Web based materials