SUAG 103 Course Outline as of Summer 2025

CATALOG INFORMATION

Dept and Nbr: SUAG 103 Title: AGRICULTURAL COMPOSTING
Full Title: Composting for Organic Farming and Gardening
Last Reviewed: 2/8/2021

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	4	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	1.00		Contact Total	17.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00 Total Student Learning Hours: 52.50

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:	SUSAG 103

Catalog Description:
Composting is the cornerstone of building healthy soils in all segments of organic agriculture production. Topics will include composting process, the role of microbes in thermophilic composting and a survey of a variety of composting methods. The course is applicable to composting for small commercial fruit, vine and vegetable operations, and the information will be of equal importance for dairy farmers or hay producers, landscapers, as well as for residential settings. This is an introductory course aimed at the professional or serious student of agriculture and horticulture.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Composting is the cornerstone of building healthy soils in all segments of organic agriculture production. Topics will include composting process, the role of microbes in

thermophilic composting and a survey of a variety of composting methods. The course is applicable to composting for small commercial fruit, vine and vegetable operations, and the information will be of equal importance for dairy farmers or hay producers, landscapers, as well as for residential settings. This is an introductory course aimed at the professional or serious student of agriculture and horticulture. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended:
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:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	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. Describe and apply proper technical skills required for composting settings and applications.
2. Discuss issues in compost management and recommend solutions.
3. Relate organics recycling to healthy soils, carbon sequestration and mitigation of climate change.
4. Identify and evaluate key factors that affect the composting process.

Objectives:
At the conclusion of this course, the student should be able to:
1. Define the basic process of composting and identify key reasons/benefits for composting.
2. Evaluate the function of basic composting components (carbon, nitrogen, water and oxygen) as "essential ingredients" in the composting process.
3. Analyze a variety of composting methods, their purposes, strengths, weaknesses, and appropriate applications in residential, commercial, and agricultural settings.
4. Identify key factors affecting the composting process.
5. Evaluate a demonstration of proper composting techniques appropriate to Sonoma County.
6. Recommend specific compost uses for a variety of settings.
7. Analyze the qualitative characteristics of finished compost.
8. Evaluate proper technical skills required for composting settings and applications.
9. Evaluate issues in compost management and recommend solutions.

Topics and Scope:

I. Composting Process
   A. Identification
   B. Analysis
   C. Benefits for large and small-scale systems and operations
II. Basic Composting Requirements
III. Composting Methods
   A. Residential settings
   B. Commercial settings
   C. Agricultural settings
IV. Key Factors that Influence the Composting Process
   A. Carbon to nitrogen ratio
   B. Surface area
   C. Aeration
   D. Moisture
   E. Temperature
   F. Microorganisms
V. Technical Skills Required for Composting
   A. Compare and contrast feedstock properties required for an efficient compost process
   B. Design optimum conditions for the microbial activity in the compost pile
   C. Compare and contrast composting methods to select the best system for a particular use
VI. Utilization and Application of Finished Compost and Mulches
   A. Understand the difference between a mulch and compost
   B. Understand standard application rates for agriculture and landscaping, as well as how to determine unique rates.
   C. Match nutrient value of the compost with the corresponding nutrient needs of the plant.
   D. Utilizing compost for carbon farming and sequestration
VII. Management and Troubleshooting of Compost Piles
   A. Maintain records of composting process
   B. Utilize temperature and moisture measurements to make adjustments to optimize conditions in a compost pile

Assignment:

1. Weekly reading (10-20 pages)
2. Weekly homework assignments (1-2 pages)
3. One research paper on one type of composting method (3-5 pages)
4. One compost monitoring project
5. Quizzes (2-3)
6. One final exam

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.

Research paper, homework assignments	Writing 20 - 30%

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.

Compost monitoring project	Skill Demonstrations 10 - 20%

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

Quizzes and final exam	Exams 50 - 60%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
The Rodale Book of Composting. Martin, Deborah and Gershuny, Grace. Rodale Press. 1992 (classic)