SUSAG 118 Course Outline as of Summer 2017

CATALOG INFORMATION

Dept and Nbr: SUSAG 118 Title: OLIVE OIL PROD & EVAL
Full Title: Olive Oil Production, Processing & Sensory Evaluation
Last Reviewed: 3/9/2015

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	2	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:

Catalog Description:
Production and processing of high quality olive oil in California. Includes variety selection, cultural methods, pest management, harvest, processing, and sensory evaluation of olive oil.

Prerequisites/Corequisites:

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: Production and processing of high quality olive oil in California. Includes variety selection, cultural methods, pest management, harvest, processing, and sensory evaluation of olive oil. (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:

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. Identify appropriate varieties of olives for various production systems.
2. Describe the steps necessary to process olives into high quality olive oil.
3. Evaluate the quality of a variety of olive oils based on sensory characteristics.

Objectives:
Upon completion of this course, the student will be able to:
1. Summarize the status of the California olive oil industry.
2. Explain the physiology of the olive plant.
3. Describe the cultural, climatic and site requirements for olives.
4. Identify appropriate varieties of olives for various production systems.
5. Compare super-high-density (SHD) and conventional olive orchard design.
6. Identify pests and diseases of olives and recommend management methods.
7. Compare mechanical harvest and hand harvest methods.
8. Describe the steps necessary to process olives into high quality olive oil.
9. Evaluate the quality of a variety of olive oils based on sensory characteristics.
10. Describe the legal requirements for labeling olive oil.

Topics and Scope:

I. Industry Status
  A. World
  B. Local
  C. Olive oil production costs and returns
II. Botany and Physiology of the Olive Plant
  A. Botanical classification
  B. Tree structure
    1. Roots
    2. Trunk
    3. Leaves

4. Branches
5. Flowers
6. Fruit

C. Growth cycle and fruit set

D. Pollination

E. Managing tree size

III. Climate and Site Selection

A. Climate

1. Cold tolerance
2. Chilling requirements
3. Heat tolerance
4. Effects of climate on oil quality

B. Site selection for the olive orchard

1. Soil
   a. drainage
   b. fertility
   c. slope
   d. mineral content
2. Improving drainage
3. Improving the soil
4. Irrigation requirements
5. Water quality
6. Frost propensity
7. Direct marketing aspects of a site

IV. Variety Selection and Production Systems

A. Variety selection

1. Best variety for specific site
2. Spanish varieties
3. Italian varieties
4. Greek varieties
5. French varieties
6. North African and Middle Eastern varieties

B. Production systems

1. traditional
2. intensive system
3. super-high-density (SHD)

C. Orchard establishment

1. Land preparation systems with alternatives to tillage on steep slopes
2. Tree layout
3. Spacing
4. How to plant a tree

V. Olive production Culture

A. Irrigation

B. Nutrition

C. Orchard floor management

D. Pruning and training

VI. Pest Management (Organic and Conventional Approaches)

A. Insects

B. Diseases

C. Weeds

D. Other problems

VII. Harvest
A. Harvest maturity
B. Harvest timing effects on alternate bearing
C. Harvest costs and trying to economize
D. Hand harvest
E. Assisted hand harvest
F. Tree and branch shakers
G. Straddle harvests on super-intensive systems
VIII. Processing
A. Transport
B. Fruit cleaning
C. Crushing
D. Malaxation
E. Phase separation
F. Cleaning
G. Filtration
H. Bottling
I. Waste management
IX. Sensory evaluation
A. Quality standards
B. Sensory evaluation
1. How to taste and rate olive oil
2. Positive and negative attributes
C. Styles of olive oil
1. variety
2. maturity
D. Labeling and marketing
1. legal labeling requirements
2. Potential market outlets

Assignment:

Assignments may include:
1. Reading from text and web sites approximately 10 - 20 pages per week.
2. Sensory evaluation for the identification of positive and negative oil attributes.
3. Field trip and 3-5 page report on key factors in the success of operations. (If necessary, alternative to field trip may be arranged with the instructor.)

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.

Field trip report.	Writing 50 - 60%

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.

Sensory evaluation.	Skill Demonstrations 10 - 20%

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.	Other Category 20 - 30%

Representative Textbooks and Materials:
Organic Olive Production Manual, Vossen, Paul, Univ of California Agriculture & Natural Resources; 1st edition, 2007. (Classic)
Instructor prepared materials.