



## Introduction to Viticulture

**Prerequisites:** Passing Grade of “C” or better in Biology or Ag Biology. Student must be in grade eleven or twelve. Or permission of teacher.

**Course Description:** Introduction to viticulture including history and development of the wine industry, grape growing, distribution, processes & factors affecting wine quality. This course covers biology, anatomy, propagation, cultivated varieties, rootstocks, climate, vineyard practices, and common diseases and pests. Provides knowledge required to establish a vineyard in Lake County.

### COURSE CONTENT

#### Student Learning Outcomes

##### Students will be able to:

1. Explain the grapevines yearly growth cycle, and correlate vineyard operations appropriate and required at each phenological stage.
2. Identify common vineyard pest and disease problems; explain their life cycles, and recommend timely and sustainable vineyard practices for disease and pest control.
3. Describe various grapevine cultivars, rootstocks, trellis types and canopy management strategies that re utilized for high quality wine grape production.
4. Describe the steps required for the determination of feasibility for planting or replanting a vineyard.

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**Objectives:**

**Upon completion of this course, students will be able to:**

1. Summarize the history and development of the wine industry.
2. Evaluate the importance of grapes both historically and currently.
3. Analyze the vineyard yearly growth cycle and relate it to timing of vineyard practices.
4. Identify and describe grapevine structures and functions.
5. Describe and contrast development of a new vineyard versus farming an established vineyard.
6. Explain how climate, soils and vineyard practices affect vine growth and grape and wine quality.
7. Identify, compare and contrast the different cultivars and rootstocks.
8. Summarize the unique characteristics of the world's major grape growing areas.
9. Identify and describe the important vineyard disease and pests and recommend integrated pest management practices.

**Topics and Scope**

- I. History and Evolution
  - A. Overview of world-wide importance of grapes and grapevines
  - B. History and development of the wine industry
  - C. Grapevine classification and Vitis species
  - D. Origin of Vitis vinifera and its spread throughout the world.
- II. Geographical Distribution of Grapegrowing
  - A. European and American varieties
  - B. Growing regions in California
  - C. Growing regions world-wide
- III. Vitis species and cultivars
  - A. Winegrape, table grape and raisin cultivars
  - B. Rootstocks
  - C. Clones
- IV. Climate and Soils
  - A. Heat summation and climatic regions
  - B. Vineyard soils and terroir
- V. Vine Structure and Function
  - A. Vocabulary
  - B. Shoot System and vine canopy
  - C. Root System and permanent wood
  - D. Vine Physiology
- VI. Vineyard Yearly growth Cycle
  - A. Bud Break
  - B. Grand period of growth
  - C. Bloom and berry set

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- D. Veraison and ripening
- E. Harvest
- F. Post-harvest
- G. Dormancy
- H. Processes and factors affecting wine quality
- VII. Vine Propagation
- VIII. Vineyard Development
  - A. Site selection
  - B. Natural resources, habitat and environmental concerns
  - C. Vineyard design – trellises and irrigation systems
  - D. Installation and planting
- IX. Farming and Established Vineyard
  - A. Vineyard practices during the cycle of vine growth
  - B. Canopy management
  - C. Vine mineral management
  - D. Sustainable agriculture practices
  - E. Methods to improve grape quality
- X. Grapevine Diseases and Pests
  - A. Identification and monitoring
  - B. Control and integrated pest management
- XI. Current importance of Grape growing and Economic Impacts

**Required Materials** (please bring to class):

- 3-ring binder & viticulture ID Notebook
- Proper writing utensil & lined paper

*\* Periodic "Binder Checks" & "ID Checks" may be conducted to ensure you remain organized. The above mentioned supplies will be expected to receive credit.*

**Late Work and Make-up policy:** No late homework will be accepted after the chapter or unit test. Homework is due on the date announced. All homework must be labeled with a: name, date, period, and name of assignment. It is the **student's responsibility** to find out what assignments he or she missed. All missed work can be made up after school or at lunch by appointment only. The students have same number of days to make up the work as they were absent.

**Viticulture Participation:** Field work is an important part of your grade. Projects could include, but are not limited to; surveying, building deer proof fencing, field soil analysis as well as development of a vineyard site. Operating farm equipment (such as weed-eaters, tractors and hand tools), soil prep, weed control, irrigation, planting and harvesting as well as designing, creating & maintain trellis systems.

**Grading Categories:**

- Classwork, Homework, Lab Activities and Projects
- Exams/Quizzes & Participation
- Leadership/FFA & SAEP (10% of grade)

**Grading Scale:**

90%-100%	= A
80%-89%	= B
70%-79%	= C
60%-69%	= D
59%-	= F

**Classroom rules, procedures and expectations:**

**All school rules apply**

- Students are expected to arrive promptly to class and be seated with materials when the bell rings.
- Students are expected to use all equipment safely, correctly, and as directed.
- Students are expected to respect the rights of others to learn.
- Students are expected to participate in labs and discussions & take notes during lectures.
- Students are expected to clean their work area and help maintain common work areas.
- Students are expected to come see me for help and for make-up assignments.
- Students are expected to place all electronic devices in backpacks (turned off) before entering the classroom.

**Participation in FFA events:** Students are required to complete a project (or SAE project), homework, class work, labs, FFA activities and a FFA record book. (10% of the grade)

- To travel with the FFA Chapter for the purpose of FFA contests, Conferences, or to exhibit at the County Fair each student should achieve a minimum 2.0 GPA at the time of travel. Attendance and behavioral records may also be examined.
- Students who miss school for such an event will be expected to collect assignments to be missed from each teacher before the date of absence.

If you have any questions or concerns, please do not hesitate to call me. Visit my website for our students: [middletownffa.com](http://middletownffa.com) or visit the FFA Student website: [middletownffa.org](http://middletownffa.org)

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## Vineyard Syllabus Acknowledgement

*I have read and understand the information presented in this Syllabus.*

Student Name: \_\_\_\_\_ Ag Class: \_\_\_\_\_

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent Contact Phone #: \_\_\_\_\_ Email: \_\_\_\_\_

*\* Your student is asked to keep this Syllabus in the portion of his/her binder labeled "Expectations." Please refer back to the syllabus at any time.*

## Vocational Agriculture Permission Slip

Over the course of the year, your child will have the opportunity to experience many different aspects of vocational agriculture classes that they may otherwise never see. These include, but are not limited to: docking, castrating, giving injections, ear notching, ear tagging, and tattooing. While we feel that these are great learning experiences for students and necessary management practices for the health and safety of animals, we realize that not everyone feels the same, so the following applies:

- No one has to participate.
- No student is forced to watch, touch, etc...Students have the option of staying in an appointed location and/or completing an alternative assignment. Grades will not be affected.
- Students are asked to inform their parents both before and after the event, using the proper terminology to explain what they have learned.
- Any animals harvested are done so for a purpose.

I have read the above and understand what my child may be exposed to.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_