



An Advanced Technological Education

Resource Center

Grape and Wine Education for the 21st Century

VIN 148 – Winery Sanitation

Date: **January 29 – May 10, 2024**

Instructor: Zoran Ljepovic

Email:

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Office Hours: Virtual, by appointment, phone, email

Semester: **Spring 2024**

Host: NE Wisconsin Tech. College

Host Course No.: ENO148/OL0

Course Credit: 3 Hours

Delivery Format: Online

Course Description

This is a course in the basic science and technology of winery sanitation. The course serves as an introduction to wine microbiology and covers all methods used for winery sanitation including premises, tanks, pumps, filters, oak barrels and sampling equipment, including but not limited to chemical agents, reagents, and thermal treatments leading to sterile bottling. Environmental issues and compliance are also addressed.

Prerequisites: VIN 146 or instructor permission

Next Course in Sequence: VIN 160 or VIN 246

Course Objectives

Through lectures, facilitated discussions, quizzes and written assignments the student will:

- Describe the difference between cleaning, sanitation, and sterilization.
- List and explain the side effects of poor sanitation control in relation to cost.
- List the regulatory agencies involved with winery sanitation and describe their function.
- Explain high risk points of contamination (critical control points) in the winemaking process.
- Describe the processes used to identify some of the basic spoilage organisms
- Demonstrate an understanding of the methods used to prevent organisms from infecting wine
- Identify the different types of cleaning compounds and their roles in detergents
- Describe the benefits and restrictions of cleaners vs. sanitizers in winery operations.
- Describe the use and function of ozone in the winery
- List and describe standard sterilization materials.
- Describe the cleaning techniques for the commonly used winery equipment.
- Explain the effects of specific sanitizing compounds on winery equipment
- Explain the process used to test for the effectiveness of a sanitation plan.
- Demonstrate an understanding of SDS sheets
- Explain OSHA regulations as they pertain to wineries
- Describe how to determine water quality
- Explain wastewater issues.

- Explain pest control strategy.
 - Critically evaluate real life sanitation issues
 - Develop winery and equipment cleaning protocol.
 - Complete a sanitation analysis procedure for a winery operation.
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Required Course Materials

These four documents are posted on the course site to be downloaded – no purchases necessary.

1. *Sanitation Guide for Wineries*. (1971). Published by the Wine Institute.
2. *Cleaning, Sanitizing, and Pest Control in Food Processing, Storage and Service Areas* published by the University of Georgia College of Agriculture and Environmental Sciences Cooperative Extension Service.
3. Marriott, Norman G. and Gravani, Robert B. (2006). *Principles of Food Sanitation*. (5th ed.). (Food Science Texts Series. Springer Publishing.
4. Schmidt, R. H. (2009). *Basic Elements of Equipment Cleaning and Sanitizing in Food Processing and Handling Operations*. University of Florida IFAS Extension Document FS14.

Instructional Methods

This is an online course with a synchronous component. An online course site (Learning Management System) is provided by the host institution to provide announcements, prerecorded lectures, notes, supplemental printed and web-based materials, and assignments. It also serves as a central point for interaction/communication between the instructor and the students.

Live Class Meetings

The live class meeting will take place once a week on **Monday from 7:00 to 8:00 p.m. Central Time** via the **Zoom** web conferencing system. Participation in the live class meetings is required and a participation grade is assigned. This is an opportunity for the instructor to go over weekly topic highlights and for students to interact with the instructor and fellow students through questions and discussions. Students are expected to be prepared to ask questions and actively participate in the discussions.

The link to the Zoom virtual classroom will be posted at the top of each weekly module. Students will use the *same* virtual classroom for their live class meetings the entire semester. The sessions will take place on the dates listed in the above schedule.

It is the student's responsibility to notify the instructor in advance if he/she must miss a class. The recording of each live class will be available within 24-48 hours after each session for those who miss a live class.

COURSE SCHEDULE ON FOLLOWING PAGE

Course Schedule and Outline of Topics

Module — Dates	Monday Live Class	Topics
1 01/29 - 02/04	01/29	Introduction and Importance of Cleaning and Sanitation in the Winery
2 02/05 – 2/11	02/05	Winery Pests and Wine Spoilage Organisms
3 02/12 – 2/18	02/12	Overview of Winemaking Process and Evaluating Risks
4 02/19 – 2/25	—	<i>No live class Presidents Day, Monday February 19</i> Cleaning Compounds Submit Winery Visit Site by 11:59 PM Central Time, Tuesday February 20
5 02/26 – 03/03	02/26	Water Quality Exam 1 (through module 3 content)
6 03/04 – 03/10	03/04	Sanitizers
7 03/11 – 03/17	03/11	Winery Specific Issues in Cleaning and Sanitizing I
8 03/18 – 03/24	03/18	Winery Specific Issues in Cleaning and Sanitizing II
9 03/25 – 03/31	03/25	Sterile Bottling "Sanitation Overview" Report due by 11:59 PM Central Time, Tuesday, March 26
10 04/01 – 04/07	04/01	SOP's for Winery Sanitation Exam 2 (through module 8 content)
11 04/08 – 04/14	04/08	Chemical Safety, Confined Space and Lock out/Tag out I Regulations
12 04/15 – 04/21	04/15	Sanitary Design SOP Cleaning/Sanitizing DRAFT Procedure due by 11:59 PM, Central Time on Wednesday, April 17, (Post to Module 13 forum/discussion board)
13 04/22 – 04/28	04/22	Review and discuss all SOP Cleaning and sanitation DRAFT procedures SOP Final Report due by 11:59 PM Central Time on Sunday, April 28
14 04/29 – 05/05	04/29	Water and Waste
15 05/06 – 05/10	05/06	Review for Final Exam Final Exam - comprehensive, emphasis on Modules 9-14

The instructor reserves the right to adjust the schedule as necessary.

Course Assignments

Course assignments (details follow) include:

1. Module readings (online lectures/presentations and print based materials)
2. Discussion Board/Forums: Posting and responding to session discussion questions
3. Three exams (2 exams, one comprehensive final)
4. Two written assignments based on observations at winery site and class material:
 - a. Sanitation Overview: Process Flow Chart with Sanitation Hazards and Controls
 - b. Cleaning and Sanitation SOP (Standard Operating Procedure)

Module Reading Assignments: Online lectures/presentations and web/print-based materials will be posted on the online course site. Students should view the prerecorded lecture and demo videos and complete the session reading assignments by deadline specified in course schedule.

Discussion Forum Postings: Module discussion questions to be answered individually by each student by deadline specified in course schedule. In addition, students are encouraged to respond or comment on classmates' postings. *In the Canvas course site, "Discussion Boards" are actually listed as "Forums" in the "Activities" box.*

Exams: There will be two exams and a final exam. The final exam will be cumulative but with an emphasis on the third part of the semester. The exams will be posted on the online course site with instructions.

Written Assignments: All written assignments will be typed, saved electronically, and submitted to the instructor via assignment links on the online course site. Spelling and grammar are extremely important in professional writing and papers will be scored accordingly. Photographs should be used in low resolution or compressed to keep file size manageable. Saving as a PDF file is encouraged for this reason.

Winery Sanitation Projects ("Sanitation Overview" and "SOP"): Students will complete a winery sanitation project for this course. There are two parts to the project. The first part involves observing, surveying and practicing sanitation operations in a winery for, ideally, 8 hours. The second part of the project is to prepare two reports to be submitted to the instructor based on your on-site experience, **1) a "Sanitation Overview" report; and 2) an "SOP" cleaning and sanitation standard operating procedure.** Detailed instruction of this class project can be found on the online course site.

The "Sanitation Overview": Process Flow Chart with Sanitation Hazards and Controls is to be presented in the format of a report of the current winery operations and sanitation state to your "boss". At minimum, the student should prepare a process flow diagram showing the general winery operations and comment on sanitation risks encountered at various steps along with current procedures for preventing or controlling contamination or adulteration. A list of the types of cleaning and sanitizing chemicals used at the facility, usage rates, suppliers, observed or anecdotal efficacy (that is, how well does the winery think they work), and any safety concerns is required. Additional documentation on current chemical, water, and other resource issues along with any recommendations for improvement or change is ideal. Comments on compliance with current regulations (especially safety issues) are encouraged.

The “SOP” Cleaning and Sanitation Standard Operating Procedure and Report is to be written using any standard SOP format and cover all the basics of an SOP as learned in the reading materials. The SOP should be written with a specific piece of equipment or cooperage (i.e. a carboy, a keg, or a barrel) in mind, and using the available materials and chemicals in the facility. Your mentor must approve of the SOP and you must follow your own instructions and perform the procedure as written. Your Report will include your approved SOP and your own evaluation of the efficacy based on your experience in trying to follow it, along with recommendations for improvement from yourself or your fellow students.

Expectations and Instructor Feedback

Students should participate in the weekly virtual class meeting. It is also the students’ responsibility to check the online course site on a regular basis, be aware of the required activities and assignments, and adhere to the deadlines. This will ensure a successful learning experience.

The instructor will make every effort to respond to student questions and complete assignment/exam grading on a timely manner.

Late Material

No late assignments will be accepted. In case of an extreme circumstance that prevented a student from submitting an assignment on time, the instructor will make an exception with a notification from the student. **The instructor will make only one exception for each student and the student will receive a 10% point deduction for the late assignment.**

Module Learning Routine

The learning routine of this course is module-based. During the first live class meeting, the instructor will provide an overview for the class and key points for Module One lecture/reading assignments in the format of questions. After the first live class meeting, students will follow the module routine listed below:

- Start module lecture/reading assignments and complete them by the following Sunday. Be prepared to answer the module key point questions provided by the instructor during the Wednesday live class meeting.
- Go to the online course site Discussion Board to answer the questions posted by the instructor in that week’s forum. These questions are designed to help you gain a better understanding of winery sanitation issues. There are no correct answers; the instructor is more interested in your perception and thoughts. These discussion questions should be answered no later than the Sunday of the module date. Students are encouraged to comment/respond to other students’ postings as well.
- Join the live class meeting every **Monday from 6:00 - 7:00 p.m. Central Time**. Be prepared to participate in discussions on module key points and discussion board/module forum questions. After reviewing the previous module, your instructor will provide key point questions for the new module.
- After the live class meeting, start the learning routine for the following week’s module.

Grading

Student grades will be determined based on their total points earned in the class. The table below outlines the total points possible and their percentage weight.

Percentage Weight of Student Performance		
Activity	Percentage	Points
Live Class Attendance	10%	100 (full points for at least 14 participations)
Discussion Participation: written and in-class	10%	100 (50 points each for first and second half)
Exam 1	15%	150
Exam 2	15%	150
Final Exam	15%	150
Sanitation Overview Report	20%	200
Cleaning/Sanitation SOP Report	15%	150
Total	100%	1000

Grade calculation: total points earned \div total points possible; then using the following scale to determine final letter grades:

90 – 100% = A	80 – 89.9% = B	70 – 79.9% = C	60 – 69.9% = D	Below 60% = F
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It is the student's responsibility to see that all assignments, projects and exams reach the instructor in a timely fashion so grades can be issued. All activities need to be completed in order to receive final grade. Incomplete grades are not given in this course.

INSTITUTIONAL POLICIES ON THE FOLLOWING PAGE

Northeast Wisconsin Technical College Institutional Policies

Student Responsibilities and Policies

As a student of NWTC, you are expected to adhere to the policies of the College, as outlined in the *Student Handbook* which can be viewed and or downloaded at:

<https://www.nwtc.edu/getmedia/4e66c6c1-cea1-4f0a-8d0b-700d647b6d06/FY21-22-Student-Handbook.pdf>

Please be fully aware of the following policies: Academic Integrity (includes plagiarism, cheating and collusion); Assessment; Copyright Notice; Refund Policy; Student Code of Conduct; Withdrawal from a Class or Program.

Withdrawals and Refunds

Should it become necessary to withdraw, it is the student's responsibility to do so according to the guidelines in the Northeast Wisconsin Technical College policies. Please see the link below for information related to withdrawals and refunds.

<https://www.nwtc.edu/admissions-and-aid/paying-for-college/tuition-and-fees>

**Students planning to withdraw from this course must also complete the VESTA Withdrawal/Change of Schedule form and submit it to the VESTA office.*

Student Email

NWTC offers a student e-mail account for all students. All official email sent from the host institution or sent through Blackboard, will go to this account. Therefore, you are responsible for setting up and monitoring your NWTC student email account. This is not optional; it is a requirement of the course. Student email can be accessed by visiting <https://www.nwtc.edu/students/new-students> Student technical assistance is available 24 hours a day, 7 days a week; call toll free at 1-866-235-5037.

Disability Act Statement

NWTC complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. For more information contact Student Accommodations Services at: <https://www.nwtc.edu/student-experience/accommodation-services>

Student Rights

For additional information regarding your rights as a student, including college policies on harassment, student rights and other services available at NWTC, please consult the NWTC Student Handbook, available through Student Services or on the NWTC webpage at <http://www.nwtc.edu>

Student Code of Conduct

Students are expected to conduct themselves in accordance with the Student Code of Conduct listed in the *Student Handbook* (see link above). As noted in the handbook, violations will be brought to the immediate attention of the Student Conduct Team and may be referred to the Dean of Student

Development or to the Supervisor of Student Involvement. Additionally, in cases where behavior(s) warrants concern over the safety of the student(s), an alert may be made to the Responsive Intervention for Student Concerns (RISC) Committee.

Course Cancellation

Unanticipated course cancellations by the institution will be posted as early as possible in the “Announcements” section of the Blackboard course site. Students will also be notified by email.