

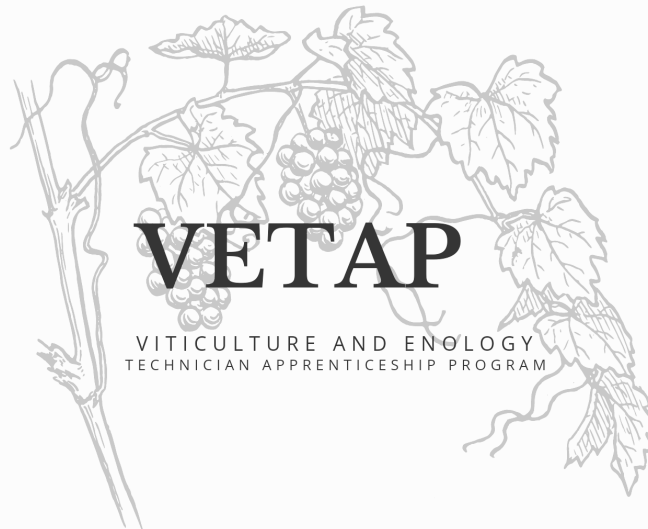
**REVISED APRIL 2021**  
**WORK PROCESS SCHEDULE**

**AND**

**RELATED INSTRUCTION OUTLINE**  
**OCCUPATION TITLE Enology Technician**

**O\*NET-SOC CODE: 11-3051.00**

**FOR THE VITICULTURE AND ENOLOGY**  
**TECHNICIAN APPRENTICESHIP PROGRAM**



# Work Process Schedule

ENOLOGY TECHNICIAN	
<b>Job Description:</b> Develop, create, and modify grape, and other fruit based alcohol products based on availability and overall appropriateness of base materials. As an Enology Technician, you must help to make these products by following best industry practices in terms of vineyard maintenance, winery sanitation, organoleptic evaluation, and lab analysis, while respecting legal regulations and record keeping.	
<b>O*NET Code:</b> 11-3051	
<b>Estimated Program Length:</b> 3000 hours	
<b>Apprenticeship Type:</b> <input checked="" type="checkbox"/> Competency-Based <input type="checkbox"/> Time-Based <input type="checkbox"/> Hybrid	

Sanitation/Sterilization.		
Competencies (approx. 300 hrs.)	Date Completed	Initial
<ul style="list-style-type: none"> <li>• Prepare standard chemical cleaner solutions and apply to multiple winemaking surfaces.</li> <li>• Utilize the proper tools to sterilize winemaking surfaces.</li> </ul>		

Equipment Training I		
Competencies (approx. 300 hrs.)	Date Completed	Initial
<ul style="list-style-type: none"> <li>• Properly utilize winemaking equipment such as pumps and filtering equipment</li> <li>• Use best practices for racking and filtering wine and cider</li> <li>• Properly operate forklift and other equipment</li> </ul>		

Packaging		
Competencies (approx. 300 hrs.)	Date Completed	Initial
<ul style="list-style-type: none"> <li>• Assist on automatic and manual bottling, labeling and disgorging systems</li> <li>• Prepare wines for bottling, including blending, stabilization, fining and filtration</li> <li>• Ensure wine quality entering bottle</li> <li>• Troubleshoot bottling problems</li> <li>• Organize and maintain bottling records.</li> </ul>		

<b>Wine Appreciation</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Begin to understand the basics of wine through organoleptic evaluation</li> <li>• Be able to identify several mainstream wine varietals and cider styles</li> <li>• Perform regular sensory analysis of wines</li> <li>• Perform bench trials</li> </ul>		

<b>Winery Maintenance &amp; Management</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Forklift and organize barrels</li> <li>• Perform cellar work as needed</li> <li>• Coordinate and calculate cellar additions</li> <li>• Maintain wine inventory, daily and monthly reports</li> <li>• Maintain cellar, lab and bottling information</li> <li>• Maintain safety and training manuals</li> </ul>		

<b>Lab Analysis</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Use of proper tools to complete various analysis</li> <li>• Be able to perform simple lab tests such as: soluble solids testing through refractometer and hydrometer, operating a pH meter, measure SO<sub>2</sub> concentration through aeration/oxidation method, use titration method to determine titratable acidity levels, measure alcohol through an eubiliometer</li> <li>• Monitor and control fermentations by (primary and secondary) sensory and data analysis</li> <li>• Microorganism identification through the use of microscope, free sulfur determination through an aeration apparatus</li> <li>• Use Spectrophotometer to analyze free SO<sub>2</sub>, Alcohol, YAN, and other critical wine analysis information</li> </ul>		

<b>Equipment Training II</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Learn to properly use equipment such as presses, filters, pressurized systems, bottling line, disgorging equipment, and others if necessary</li> <li>• Perform preventative maintenance on wine equipment</li> </ul>		

<b>Winemaking Formulations/Additions</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Perform proper calculations to determine addition levels of general additives such as sulfur dioxide</li> <li>• Perform bench trials on wines using several levels of appropriately formulated additions to determine proper addition levels of wine altering chemicals such as acids, sweeteners, flavorants and fining agents</li> <li>• Report to the federal government (TTB) on wine premise operations</li> </ul>		

<b>Wine Tasting Room Training</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Properly serve wine in a public setting</li> <li>• Fluently discuss wines being poured</li> <li>• Professional demeanor and follow all legal regulations</li> </ul>		

<b>Vineyard &amp; Grape Knowledge &amp; Maintenance</b>		
<b>Competencies (approx. 300 hrs.)</b>	<b>Date Completed</b>	<b>Initial</b>
<ul style="list-style-type: none"> <li>• Vine training system, rootstocks, pruning, techniques suited for local area</li> <li>• Plan for intake of fruit and communicate with growers to schedule harvest</li> <li>• Vineyard scouting including basic disease/pest observation, diagnosis, harvest season sampling to determine harvest dates</li> <li>• Collect and process berry samples to monitor Brix &amp; pH to ensure grapes are harvested at the optimum time</li> <li>• Assist with planning, implementing and maintaining records for scheduled deadlines for all major vineyard activities</li> </ul>		

The above work process is intended as a guide. It is not to be followed in any particular sequence, and it is understood that some adjustments may be necessary in the hours allotted for different work experience. In all cases, the apprentice is to receive sufficient experience to make the apprentice fully competent and use good workmanship in all work processes which are part of the trade. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

## Related Instruction Outline

<b>Provider</b>
<b>Name:</b> MiraCosta Community College
<b>Address:</b> 1 Barnard Drive, Oceanside, CA 92056
<b>Suggested Related Instruction Hours:</b> 525

<b>Course Number</b>	<b>Course Title</b>	<b>Contact Hours</b>
HORT 145	Sensory Analysis of Wines	75
HORT 147	Wines of California	75
HORT 148	Introduction to Wine Production	75
HORT 149	Vineyard Production and Management	150
HORT 150	Winery Operations and Management	150

## Related Instruction Outline

<b>Provider</b>
<b>Name:</b> Mt. San Jacinto Community College
<b>Address:</b> 1499 N. State Street, San Jacinto, CA 92583
<b>Suggested Related Instruction Hours:</b> 600

<b>Course Number</b>	<b>Course Title</b>	<b>Contact Hours</b>
WINE 100	Introduction to Viticulture	150
WINE 102	Introduction to Enology	150
WINE 500	Wine Hospitality	150
WINE 501	Introduction to Winery Business Principles	150