For Instructional Programs

Program or Area(s) of Study under Review: Viticulture and Winery Technology

Term/Year of Review: Fall 2021

NOTE:
Unless specifically mentioned, 'VWT Faculty' includes adjuncts.
Night classes are the evening block where the majority of VWT classes are scheduled.

Summary of Program Review:

A.   Major Findings

   1.   Strengths:

> Development and launch of seven new local certificates with the potential to be stackable.
> Development and launch of a new Wine Production certificate conducive to distance education.
> Piloting a distance education model that creates access for new student populations.
> Replanting half of the vineyard.
> Addition of a climate change block to the vineyard.
> Acquisition of major equipment projects including the bottling line, cross-flow filter, and FOSS machine.
> Enhanced experiential learning through development of wine trial lots.
> Outcomes from the cellar math program.
> Enrollment in entry level viticulture night classes.
> Enrollment in entry level winemaking night classes.
> Enrollment in entry level wine marketing night classes.

   2.   Areas for Improvement:

> PROGRAM & INDUSTRY ENGAGEMENT
> Marketing the academic program.
> Declining enrollment for 10+ years.
> Frequency of classes in the night block.
> Generating degree completions.
> Evaluation and adjustment of low-enrolled VWT classes.
> Consistency in renewal of key faculty contracts to maintain commercial labs (vineyard and winery) beyond the scope of a standard teaching contract.
> Ensuring consistent staffing.
> Increasing wine sales.
> Investing in the Program Coordinator position to levels consistent with recent history.
> Scheduling of faculty office hours.
>
> INTEGRITY

Honoring 10+1 as it relates to the VWT program; specifically, execution of the wine marketing plan and operation of the winery laboratory.
Honoring college process with an emphasis on adjunct hiring.
Support for winery compliance from the district.

LEARNING EXCELLENCE
Respecting adjunct faculty contracts and maximizing support.
Alignment of Instructional Assistant work schedules with the academic course schedule with an emphasis on laboratory classes and when requested by VWT faculty.
Ensuring instructional assistant support leading up to evening classes.
Fulfilling capstone projects defined by faculty—FOSS analysis for classes with wine tastings, curriculum cross-training for staff, and integration of curriculum into grape and wine production.
Reinstating open lab hours to increase access to tutoring.
Enrollment in daytime viticulture classes.
Enrollment in upper level wine marketing night classes.

3. **Projected Program Growth, Stability, or Viability:**

Growth

B. **Program's Support of Institutional Mission and Goals**

1. **Description of Alignment between Program and Institutional Mission:**

Evolving roles in a world that is:

DIVERSE: VWT is the agriculture program at a Hispanic Serving Institution and LatinX/hispanic students have lower course completion rates than the campus average.

DYNAMIC: The development of low unit certificates allows industry professionals to quickly expand their skills and contribute more to their employers.

INTERDEPENDENT: The qualifications within the VWT program have numerous classes overlapping with other degree tracks to ensure learning has a broad context.

2. **Assessment of Program's Recent Contributions to Institutional Mission:**

The declining enrollment and high course caps demonstrates a great potential to serve more students without added expense to the college. This directly supports a primary tax base within the district.

3. **Recent Program Activities Promoting the Goals of the Institutional Strategic Plan and Other Institutional Plans/Initiatives:**

Institutional Strategic Goal 1: Work with local educational partners to promote opportunities at NVC and equip incoming students with the skills and resources needed for college success

The VWT program works closely with the Napa Valley Vintners, Napa Valley Grapegrowers, and Winegrowers of Napa County to promote course offerings and enhance integration of the VWT program into the community.

Institutional Strategic Goal 2: Engage NVC students and assist in their progress towards educational and job training goals

The VWT program offers college-credit classes and a broad array of degrees and certificates to provide learning opportunities that enable students to progress towards their learning goals.

Institutional Strategic Goal 3: Increase NVC student achievement and completion of educational and job training goals

While there does appear to be an increase in completion of academic qualifications, there is room for improvement with existing resources. The college has devoted significant resources to updating and modernizing laboratories that do enhance the ability to provide current instruction on advanced practices.

Institutional Strategic Goal 4: Achieve equity in student outcomes and promote equitymindedness as a means to evaluate all District practices

Employment is a significant barrier in pursuing higher education. The VWT program offers the majority of classes in a standard evening time block which minimizes/eliminates conflict with work. Not only does this allow students to maintain their income, it ensures local businesses are able to train their staff without interrupting production.

Institutional Strategic Goal 5: Ensure the fiscal stability of NVC as a community-supported district

The VWT program has identified increased marketing as a major goal. Current enrollment combined with faculty commitment to student access (as demonstrated through high course capacities) to dramatically increase enrollment.

Institutional Strategic Goal 6: Enhance collaboration between NVC and community and civic partners

To reiterate from Strategic Goal, the synergy between the VWT program and local wine organizations is indispensable in our shared success.

C. **New Objectives/Goals:**

Complete the Wine Education Center.
Complete the vineyard replant.
Pursue sustainable agriculture qualifications and the essential equipment needed.
Acquire new wine tanks designed specifically for winery applications.
Develop capacity to enhance sparkling wine production.
Enhance instruction of microbiology.
Have meaningful conversations about enrollment and scheduling trends in relation to development of a bachelor's degree.
Enhance links with wine trade organizations.
Equip incoming students with sensory training.
Evaluate suggested prerequisites for intensive wine regions classes.
Integrate capstone experience between faculty and classes.

D. Description of Process Used to Ensure "Inclusive Program Review"

A draft of the program review was developed by the Program Coordinator and all VWT faculty had the opportunity to review, edit, and make additions. Program review is linked to the VWT Unit Plan which also includes contributions from the entire faculty.

Program Review Report | Fall 2021 |

This report covers the following program, degrees, certificates, area(s) of study, and courses (based on the Taxonomy of Programs on file with the Office of Academic Affairs):

Program	Viticulture & Winery Technology		
Area(s) of Study	Winemaking	Viticulture	Wine Marketing & Sales
Degree(s)/Certificate(s)	Winemaking: AS	Viticulture: AS Viticulture and Enology: CoA	Wine Marketing and Sales: AS Wine Marketing and Sales: CoA
Courses	VWT 136	VWT 130	VWT 241
	VWT 137	VWT 132	
	VWT 140	VWT 134	
	VWT 145	VWT 229	
	VWT 147	VWT 230	
	VWT 150	VWT 231	
	VWT 151	VWT 232	
	VWT 152	VWT 233	
	VWT 153	VWT 234	
	VWT 154		
	VWT 172		
	VWT 173		
	VWT 180		
	VWT 190		
	VWT 191		
	VWT 270		
	VWT 271		
	VWT 272		
	VWT 275		

	VWT 280			
	VWT 281			
	VWT 282			
	VWT 283			
	VWT 288			
	VWT 290			
	VWT 291			

Taxonomy of Programs, June 2021

I. PROGRAM DATA

A. Demand

1. Headcount and Enrollment

	2018-2019	2019-2020	2020-2021	Change over 3-Year Period
Headcount				
Within the Program	355	318	216	-39.2%
Across the Institution	8,176	8,181	7,208	-11.8%
Enrollments				
Viticulture	304	214	200	-34.2%
VWT-130	119	89	84	-29.4%
VWT-132	39	26	33	-15.4%
VWT-134	31	23	17	-45.2%
VWT-229	18	8	--	-100%
VWT-230	33	19	12	-63.6%
VWT-231	24	--	9	-62.5%
VWT-232	19	19	18	-5.3%
VWT-233	--	13	12	--
VWT-234	21	17	15	-28.6%
Wine Marketing & Sales	22	21	15	-31.8%
VWT-241	22	21	15	-31.8%
Winemaking	551	413	290	-47.4%
VWT-136	61	52	34	-44.3%
VWT-137	34	22	21	-38.2%
VWT-140	27	13	12	-55.6%
VWT-147	12	--	21	75.0%

VWT-150	13	17	--	-100%
VWT-151	22	21	8	-63.6%
VWT-152	--	15	12	--
VWT-153	22	21	--	-100%
VWT-154	13	--	16	23.1%
VWT-172	49	23	20	-59.2%
VWT-173	48	22	19	-60.4%
VWT-180	85	75	39	-54.1%
VWT-190	2	6	5	150%
VWT-191	5	5	2	-60.0%
VWT-270	30	21	21	-30.0%
VWT-271	24	33	16	-33.3%
VWT-272	27	25	12	-55.6%
VWT-275	--	17	12	--
VWT-280	30	10	8	-73.3%
VWT-281	23	--	4	-82.6%
VWT-282	13	--	--	-100%
VWT-290	7	9	7	0.0%
VWT-291	4	6	1	-75.0%
Within the Program	877	648	505	-42.4%
Across the Institution	32,545	33,102	30,409	-6.6%
Source: SQL Enrollment Files				

RPIE Analysis: The number of students enrolled (headcount) in the Viticulture and Winery Technology Program decreased by 39.2% over the past three years, while headcount across the institution decreased by 11.8%. Enrollment within the Viticulture and Winery Technology Program decreased by 42.4%, while enrollment across the institution decreased by 6.6%

Enrollment in the following courses and areas of study changed by more than 10% (±10%) between 2018-2019 and 2020-2021:

> *Courses with enrollment increases:*
>   o *VWT-190 (150%)*
>   o *VWT-147 (75.0%)*
>   o *VWT-154 (23.1%)*
>
> *Courses and areas of study with enrollment decreases:*
>   o *VWT-150 (-100%)*
>   o *VWT-153 (-100%)*
>   o *VWT-229 (-100%)*
>   o *VWT-282 (-100%)*
>   o *VWT-281 (-82.6%)*
>   o *VWT-291 (-75.0%)*
>   o *VWT-280 (-73.3%)*
>   o *VWT-230 (-63.6%)*
>   o *VWT-151 (-63.6%)*
>   o *VWT-231 (-62.5%)*

- VWT-173 (-60.4%)
- VWT-191 (-60.0%)
- VWT-172 (-59.2%)
- VWT-140 (-55.6%)
- VWT-272 (-55.6%)
- VWT-180 (-54.1%)
- Winemaking (-47.4%)
- VWT-134 (-45.2%)
- VWT-136 (-44.3%)
- VWT-137 (-38.2%)
- Viticulture (-34.2%)
- VWT-271 (-33.3%)
- VWT-241 (-31.8%)
- Wine Marketing and Sales (-31.8%)
- VWT-270 (-30.0%)
- VWT-130 (-29.4%)
- VWT-234 (-28.6%)
- VWT-132 (-15.4%)

For courses offered in two of the past three years, enrollments decreased for the following three courses between 2019-2020 and 2020-2021:
- VWT-275 (-29.4%)
- VWT-152 (-20.0%)
- VWT-233 (-7.7%)

Program Reflection:

The program taxonomy is not correct. This is consistent with many Career Education programs during this time frame. The VWT Program Coordinator collected enrollment reports from OAA and compiled in the table below. There are slight discrepancies between the information from OAA and RPIE.

While the decrease in enrollment has likely been influenced by Covid-19, this declining enrollment has been a decade long trend and mirrors institutional trends.

Student Enrollment by Area of Emphasis:

	F18	S19	F19	S20	F20	S21	Total
Viticulture	104	165	85	131	56	128	669
Winemaking	131	167	103	146	48	68	663
Marketing	128	92	116	32	51	93	512
Work Experience	9	8	15	10	10	3	55
Total	372	432	319	319	165	292	1899

2. **Average Class Size**

	2018-2019	**2019-2020**	**2020-2021**	**Three-Year**

	Sections	Average Size	Sections	Average Size	Sections	Average Size	Average Section Size	Trend
Viticulture	11	27.6	11	19.5	11	18.2	21.8	-34.1%
VWT-130	4	29.8	4	22.3	4	21.0	24.3	-29.5%
VWT-132	1	39.0	1	26.0	1	33.0	32.7	-15.4%
VWT-134	1	31.0	1	23.0	1	17.0	23.7	-45.2%
VWT-229	1	18.0	1	8.0	--	--	13.0	-100%
VWT-230	1	33.0	1	19.0	1	12.0	21.3	-63.6%
VWT-231	1	24.0	--	--	1	9.0	16.5	-62.5%
VWT-232	1	19.0	1	19.0	1	18.0	18.7	-5.3%
VWT-233	--	--	1	13.0	1	12.0	12.5	--
VWT-234	1	21.0	1	17.0	1	15.0	17.7	-28.6%
Wine Marketing & Sales	1	22.0	1	21.0	1	15.0	19.3	-31.8%
VWT-241	1	22.0	1	21.0	1	15.0	19.3	-31.8%
Winemaking	25	22.0	23	18.0	22	13.2	17.9	-40.0%
VWT-136	2	30.5	2	26.0	2	17.0	24.5	-44.3%
VWT-137	1	34.0	1	22.0	1	21.0	25.7	-38.2%
VWT-140	1	27.0	1	13.0	1	12.0	17.3	-55.6%
VWT-147	1	12.0	--	--	1	21.0	16.5	75.0%
VWT-150	1	13.0	1	17.0	--	--	15.0	-100%
VWT-151	1	22.0	1	21.0	1	8.0	17.0	-63.6%
VWT-152	--	--	1	15.0	1	12.0	13.5	--
VWT-153	1	22.0	1	21.0	--	--	21.5	-100%
VWT-154	1	13.0	--	--	1	16.0	14.5	23.1%
VWT-172	2	24.5	2	11.5	2	10.0	15.3	-59.2%
VWT-173	1	48.0	1	22.0	1	19.0	29.7	-60.4%
VWT-180	3	28.3	2	37.5	2	19.5	28.4	-31.1%
VWT-190	1	2.0	1	6.0	1	5.0	4.3	150%
VWT-191	1	5.0	1	5.0	1	3.0	4.3	-40.0%
VWT-270	1	30.0	1	21.0	1	21.0	24.0	-30.0%
VWT-271	1	24.0	1	33.0	1	16.0	24.3	-33.3%
VWT-272	1	27.0	1	25.0	1	12.0	21.3	-55.6%
VWT-275	--	--	1	17.0	1	12.0	14.5	--
VWT-280	1	30.0	2	5.0	1	8.0	12.0	-73.3%
VWT-281	1	23.0	--	--	1	4.0	13.5	-82.6%
VWT-282	1	13.0	--	--	--	--	13.0	-100%
VWT-290	1	7.0	1	9.0	1	7.0	7.7	0.0%
VWT-291	1	4.0	1	6.0	--	--	5.5	-100%
Program Average*	37	23.7	35	18.5	34	14.9	19.2	-37.1%
Institutional Average*	1,313	24.8	1,348	24.6	1,171	25.9	25.1	4.4%
Source: SQL Enrollment and Course Sections Files								

Average Section Size across the three-year period for courses, and both within academic years and across the three-year period for the program and institutional levels is calculated as:

Total # Enrollments.

Total # Sections

It is not the average of the three annual averages.

RPIE Analysis: Over the past three years, the Viticulture and Winery Technology Program has claimed an average of 19.2 students per section. The average class size in the program has been lower than the average class size of 25.1 students per section across the institution during this period. Average class size in the program decreased by 37.1% between 2018-2019 and 2020-2021. Average class size at the institutional level increased by 4.4% over the same period.

Average class size in the following courses and areas of study changed by more than 10% (±10%) between 2018-2019 and 2020-2021:

Courses with increases in average class size:
- o *VWT-190 (150%)*
- o *VWT-147 (75.0%)*
- o *VWT-154 (23.1%)*

Courses and areas of study with decreases in average class size:
- o *VWT-291 (-100%)*
- o *VWT-282 (-100%)*
- o *VWT-229 (-100%)*
- o *VWT-153 (-100%)*
- o *VWT-150 (-100%)*
- o *VWT-281 (-82.6%)*
- o *VWT-280 (-73.3%)*
- o *VWT-230 (-63.6%)*
- o *VWT-151 (-63.6%)*
- o *VWT-231 (-62.5%)*
- o *VWT-173 (-60.4%)*
- o *VWT-172 (-59.2%)*
- o *VWT-272 (-55.6%)*
- o *VWT-140 (-55.6%)*
- o *VWT-134 (-45.2%)*
- o *VWT-136 (-44.3%)*
- o *VWT-191 (-40.0%)*
- o *Winemaking (-40.0%)*
- o *VWT-137 (-38.2%)*
- o *Viticulture (-34.2%)*
- o *VWT-271 (-33.3%)*
- o *VWT-241 (-31.8%)*
- o *Wine Marketing and Sales (-31.8%)*
- o *VWT-180 (-31.1%)*
- o *VWT-270 (-30.0%)*
- o *VWT-130 (-29.4%)*

				VWT-234 (-28.6%)
				VWT-132 (-15.4%)

Program Reflection:

The following charts investigate enrollment by learning pathway and time of day. These tables suggest the best enrolled classes are:

-Entry level viticulture courses scheduled in the evening.

-Entry level wine marketing courses scheduled in the evening.

-Entry level winemaking courses scheduled in the evening.

-Daytime winemaking courses (with more variability in enrollment).

		Viticulture		F18	S19	F19	S20	F20	S21	Ave.	Notes
VWT	130	General Viticulture	Night	34	38	28	25	15	23	27.2	
VWT	130	General Viticulture	Day	18	16	22	9	17	19	16.8	
VWT	132	Vnyd Soils, Fertil & Irrg	Night		38		27		31	32.0	
VWT	134	Vineyard Pruning	Night		29		19		14	20.7	
VWT	230	Fall Viticulture Operations	Day	32		18		11		20.3	
VWT	231	Spring Viticulture Operations	Day		25		18		9	17.3	
VWT	232	Vineyard Management	Day		19		19		18	18.7	
VWT	233	Advanced Viticulture	Day				14		14	14.0	Not Required
VWT	234	Integr Pest Control for Grapes	Day	20		17		13		16.7	
			Total:	104	165	85	131	56	128	20.4	(avg. of avg.)

		Winemaking		F18	S19	F19	S20	F20	S21	Ave.	Notes
VWT	172	Lab Analysis of Musts/Wines	Night	26	18	19	20	9	10	17.0	Covid Cap
VWT	173	Sensory Evaluation of Wine	Day		48	22	17			29.0	
VWT	173	Sensory Evaluation of Wine	Night						15	15.0	
VWT	180	Fundamentals of Enology	Night	26	32	33	36	15	18	26.7	
VWT	180	Fundamentals of Enology	Day	20						20.0	
VWT	270	Advanced Winemaking	Day	29		20				24.5	
VWT	270	Advanced Winemaking	Night					16		16.0	
VWT	271	Winery Management	Day		22					22.0	
VWT	271	Winery Management	Night				32		11	21.5	
VWT	272	Fund Wine Chem/Microbio	Night		27		22		10	19.7	
VWT	280	Fall Winery Operations	Day	30		9		8		15.7	New Prereq./Covid Cap
VWT	281	Spring Winery Operations	Day		20		19		4	14.3	Covid Cap
			Total:	131	167	103	146	48	68	20.1	(avg. of avg.)

Wine Marketing and Sales				F18	S19	F19	S20	F20	S21	Ave.	Notes
VWT	136	Wines of the World	Night	26	33	30		19	14	24.4	
VWT	137	Wines of California	Night		34				19	26.5	
VWT	140	Cultural Appreciation of Wine	Night	27		13		10		16.7	
VWT	147	Wines of the New World	Night		12				21	16.5	Not Required
VWT	150	Wines of the Napa Valley	Night	13		17				15.0	Not Required
VWT	151	Wines of France	Night	22		18		8		16.0	Not Required
VWT	152	The Wines of Italy	Night				15		12	13.5	Not Required
VWT	153	Wines of Spain & Portugal	Night	21		20				20.5	Not Required
VWT	154	Wines of Germany & Austria	Night		13				16	14.5	Not Required
VWT	241	Wine Marketing	Night	19		18		14		17.0	
VWT	275	Winery Complia & Recordkeepi	Night				17		11	14.0	Not Required
			Total:	128	92	116	32	51	93	17.7	(avg. of avg.)

Work Experience				F18	S19	F19	S20	F20	S21	Ave.	Notes
VWT	190	Viticulture/Winery Tech Woex 1		2		6		4		4.0	
VWT	191	Viticulture/Winery Tech Woex 2			4		4		2	3.3	
VWT	290	Viti/Winery Tech WOEX 3		7		9		6		7.3	
VWT	291	Viti & Winery Tech WOEX 4			4		6		1	3.7	
			Total:	9	8	15	10	10	3	4.6	(avg. of avg.)

3. **Fill Rate and Productivity**

Fill Rate*			
	Enrollments*	Capacity	Fill Rate
2018-2019	846	1,239	68.3%
2019-2020	640	1,164	55.0%
2020-2021	505	831	60.8%
Three-Year Program Total	1,991	3,234	61.6%
Institutional Level	83,156	101,258	82.1%
Productivity*			
	FTES	FTEF	Productivity
2018-2019	81.5	5.8	14.1
2019-2020	73.3	6.1	12.0
2020-2021	50.9	5.4	9.4
Three-Year Program Total	205.7	17.3	11.9
Source: SQL Enrollment and Course Sections Files			

RPIE Analysis: Fill rates within the Viticulture and Winery Technology Program tend to be lower than the fill rate at the institutional level. [Compare program-level rate of 61.6% to institution-level rate of 82.1% over the past three years.] Between 2018-2019 and 2019-2020, both enrollment and capacity decreased, resulting in a decrease in fill rate (due to a higher rate of decrease in enrollment). Between 2019-2020 and 2020-2021, both enrollment and capacity decreased, resulting in an increase in fill rate (due to a higher rate of decrease in capacity).

Productivity decreased from 14.1 to 9.4 over the three-year period. [Productivity has not been calculated at the institutional level.] The three-year program

productivity of 11.9 is lower than the target level of 17.5, which reflects 1 FTEF (full-time equivalent faculty) accounting for 17.5 FTES (full-time equivalent students) across the academic year. (This target reflects 525 weekly student contact hours for one full-time student across the academic year.)

*Note: Fill rates and productivity reported in the table do not include three Viticulture and Winery Technology section offerings for summer terms over the past three years. As a result, the enrollment figures reported here might differ from those reported in Section I.A.1.

Program Reflection:

Fill rates demonstrate the VWT program's ability to grow enrollment without adding sections. Beyond that, 'fill rates' are more applicable for multiple sections of the same class. On a broader scope, fill rates are not comparable since course capacities are inconsistent as an institution. This metric incentivizes lower class capacities and thereby diminishes student access. For example, during F21 the fill rate for VWT 180 was 62% and VWT 172 was 91.7%. VWT 180 served 31 students; VWT 172 served 12. VWT's use of high class capacities speaks to the faculty's dedication to student accessibility.

The metric of productivity would benefit from clarification as summarized in the table below. The values represent the composite productivity for the time frame of this program review, and exclude 'Operations' classes since there is (1) minimal flexibility in scheduling and (2) required to operate a commercial vineyard and winery.

Track	Productivity	Time of Day			
Marketing	9.26	Night	9.26	Top Half	11.91
				Bottom Half	6.78
		Day	N/A	Top Half	N/A
				Bottom Half	N/A
Viticulture	10.69	Night	13.36	Top Half	16.49
				Bottom Half	10.24
		Day	8.39	Top Half	9.64
				Bottom Half	7.14
Winemaking	10.92	Night	10.30	Top Half	13.65
				Bottom Half	6.95
		Day	12.71	Top Half	16.50
				Bottom Half	9.88

				Class		Offering	Produc.	Units	FTEF	FTES
S19	Wine	VWT	173	Sensory Evaluation of Wine	48	Day	24.00	3	0.2	4.80
S19	Viticulture	VWT	130	General Viticulture	38	Night	19.00	3	0.2	3.80
S19	Viticulture	VWT	132	Vnyd Soils, Fertil & Irrg	38	Night	19.00	3	0.2	3.80
S20	Wine	VWT	180	Fundamentals of Enology	36	Night	18.00	3	0.2	3.60
F18	Viticulture	VWT	130	General Viticulture	34	Night	17.00	3	0.2	3.40
S19	Marketing	VWT	137	Wines of California	34	Night	17.00	3	0.2	3.40
S19	Marketing	VWT	136	Wines of the World	33	Night	16.50	3	0.2	3.30
F19	Wine	VWT	180	Fundamentals of Enology	33	Night	16.50	3	0.2	3.30
S19	Wine	VWT	180	Fundamentals of Enology	32	Night	16.00	3	0.2	3.20
S20	Wine	VWT	271	Winery Management	32	Night	16.00	3	0.2	3.20
S21	Viticulture	VWT	132	Vnyd Soils, Fertil & Irrigatio	31	Night	15.50	3	0.2	3.10
F19	Marketing	VWT	136	Wines of the World	30	Night	15.00	3	0.2	3.00
S19	Viticulture	VWT	134	Vineyard Pruning	29	Night	14.43	1	0.067	0.97
F18	Wine	VWT	270	Advanced Winemaking	29	Day	14.50	3	0.2	2.90
F19	Viticulture	VWT	130	General Viticulture	28	Night	14.00	3	0.2	2.80
S20	Viticulture	VWT	132	Vnyd Soils, Fertil & Irrg	27	Night	13.50	3	0.2	2.70
F18	Marketing	VWT	140	Cultural Appreciation of Wine	27	Night	13.50	3	0.2	2.70
S19	Wine	VWT	272	Fund Wine Chem/Microbio	27	Night	13.50	3	0.2	2.70
F18	Marketing	VWT	136	Wines of the World	26	Night	13.00	3	0.2	2.60
F18	Wine	VWT	172	Lab Analysis of Musts/Wines	26	Night	13.00	3	0.2	2.60
F18	Wine	VWT	180	Fundamentals of Enology	26	Night	13.00	3	0.2	2.60
S20	Viticulture	VWT	130	General Viticulture	25	Night	12.50	3	0.2	2.50
S21	Viticulture	VWT	130	General Viticulture	23	Night	11.50	3	0.2	2.30
F19	Viticulture	VWT	130	General Viticulture	22	Day	11.00	3	0.2	2.20
S20	Marketing	VWT	137	Wines of California	22	Night	11.00	3	0.2	2.20
F18	Marketing	VWT	151	Wines of France	22	Night	10.95	1	0.067	0.73
F19	Wine	VWT	173	Sensory Evaluation of Wine	22	Day	11.00	3	0.2	2.20
S19	Wine	VWT	271	Winery Management	22	Day	11.00	3	0.2	2.20
S20	Wine	VWT	272	Fund Wine Chem/Microbio	22	Night	11.00	3	0.2	2.20
S20	Marketing	VWT	136	Wines of the World	21	Night	10.50	3	0.2	2.10
S21	Marketing	VWT	147	Wines of the New World	21	Night	10.45	1	0.067	0.70
F18	Marketing	VWT	153	Wines of Spain & Portugal	21	Night	10.45	1	0.067	0.70
F19	Marketing	VWT	153	Wines of Spain & Portugal	20	Night	9.95	1	0.067	0.67
S20	Wine	VWT	172	Lab Analysis of Musts/Wines	20	Night	10.00	3	0.2	2.00
F18	Wine	VWT	180	Fundamentals of Enology	20	Day	10.00	3	0.2	2.00
F18	Viticulture	VWT	234	Integr Pest Control for Grape	20	Day	10.00	3	0.2	2.00
F19	Wine	VWT	270	Advanced Winemaking	20	Day	10.00	3	0.2	2.00
S21	Viticulture	VWT	130	General Viticulture	19	Day	9.50	3	0.2	1.90
S20	Viticulture	VWT	134	Vineyard Pruning	19	Night	9.45	1	0.067	0.63
F20	Marketing	VWT	136	Wines of the World	19	Night	9.50	3	0.2	1.90
S21	Marketing	VWT	137	Wines of California	19	Night	9.50	3	0.2	1.90
F19	Wine	VWT	172	Lab Analysis of Musts/Wines	19	Night	9.50	3	0.2	1.90
S19	Viticulture	VWT	232	Vineyard Management	19	Day	9.50	3	0.2	1.90
S20	Viticulture	VWT	232	Vineyard Management	19	Day	9.50	3	0.2	1.90
F18	Marketing	VWT	241	Wine Marketing	19	Night	9.50	3	0.2	1.90
F18	Viticulture	VWT	130	General Viticulture	18	Day	9.00	3	0.2	1.80
F19	Marketing	VWT	151	Wines of France	18	Night	8.96	1	0.067	0.60
S19	Wine	VWT	172	Lab Analysis of Musts/Wines	18	Night	9.00	3	0.2	1.80
S21	Wine	VWT	180	Fundamentals of Enology	18	Night	9.00	3	0.2	1.80
S21	Viticulture	VWT	232	Vineyard Management	18	Day	9.00	3	0.2	1.80
F19	Marketing	VWT	241	Wine Marketing	18	Night	9.00	3	0.2	1.80
F20	Viticulture	VWT	130	General Viticulture	17	Day	8.50	3	0.2	1.70
F19	Marketing	VWT	150	Wines of the Napa Valley	17	Night	8.46	1	0.067	0.57
S20	Wine	VWT	173	Sensory Evaluation of Wine	17	Day	8.50	3	0.2	1.70
F19	Viticulture	VWT	234	Integr Pest Control for Grape	17	Day	8.50	3	0.2	1.70
S20	Wine	VWT	275	Winery Complia & Recordkee	17	Night	8.46	1	0.067	0.57
S19	Viticulture	VWT	130	General Viticulture	16	Day	8.00	3	0.2	1.60
S21	Marketing	VWT	154	Wines of Germany & Austria	16	Night	7.96	1	0.067	0.53
F20	Wine	VWT	270	Advanced Winemaking	16	Night	8.00	3	0.2	1.60
F20	Viticulture	VWT	130	General Viticulture	15	Night	7.50	3	0.2	1.50
S20	Marketing	VWT	152	The Wines of Italy	15	Night	7.46	1	0.067	0.50
S21	Wine	VWT	173	Sensory Evaluation of Wine	15	Night	7.50	3	0.2	1.50
F20	Wine	VWT	180	Fundamentals of Enology	15	Night	7.50	3	0.2	1.50
S21	Viticulture	VWT	134	Vineyard Pruning	14	Night	6.97	1	0.067	0.47
S21	Marketing	VWT	136	Wines of the World	14	Night	7.00	3	0.2	1.40
S20	Viticulture	VWT	233	Advanced Viticulture	14	Day	7.00	3	0.2	1.40
S21	Viticulture	VWT	233	Advanced Viticulture	14	Day	7.00	3	0.2	1.40
F20	Marketing	VWT	241	Wine Marketing	14	Night	7.00	3	0.2	1.40
F19	Marketing	VWT	140	Cultural Appreciation of Wine	13	Night	6.50	3	0.2	1.30
F18	Marketing	VWT	150	Wines of the Napa Valley	13	Night	6.47	1	0.067	0.43
S19	Marketing	VWT	154	Wines of Germany & Austria	13	Night	6.47	1	0.067	0.43
F20	Viticulture	VWT	234	Integr Pest Control for Grape	13	Day	6.50	3	0.2	1.30
S19	Marketing	VWT	147	Wines of the New World	12	Night	5.97	1	0.067	0.40
S21	Marketing	VWT	152	The Wines of Italy	12	Night	5.97	1	0.067	0.40
S21	Wine	VWT	271	Winery Management	11	Night	5.50	3	0.2	1.10
S21	Marketing	VWT	275	Winery Complia & Recordkeep	11	Night	5.47	1	0.067	0.37
F20	Marketing	VWT	140	Cultural Appreciation of Wine	10	Night	5.00	3	0.2	1.00
S21	Wine	VWT	172	Lab Analysis of Musts/Wines	10	Night	5.00	3	0.2	1.00
S21	Wine	VWT	272	Fund Wine Chem/Microbio	10	Night	5.00	3	0.2	1.00
S20	Viticulture	VWT	130	General Viticulture	9	Day	4.50	3	0.2	0.90
F20	Wine	VWT	172	Lab Analysis of Musts/Wines	9	Night	4.50	3	0.2	0.90
F20	Marketing	VWT	151	The Wines of France	8	Night	3.98	1	0.067	0.27
							10.60		14.01	148.53

13

4. Labor Market Demand

Economic Development Department Standard Occupational Classification Description (SOC Codes): 11-9013, 19-1012, and 19-1013	Numeric Change in Employment	Projected Growth (% Change in Employment)	Average Annual Job Openings (New Jobs + Replacement Needs)
Napa County (2018-2028)	-100	-5.6%	1,650
Bay Area[A] (2018-2028)	-820	-6.9%	10,720
California (2018-2028)	-1,900	-1.9%	97,300
Source: Economic Development Department Labor Market Information, Occupational Data, Occupational Projections (http://www.labormarketinfo.edd.ca.gov) *[A]Bay Area counties include: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solono, and Sonoma. Figures also include San Benito County (reported with projections for Santa Clara County).*			

RPIE Analysis: The figures reported in the table above pertain to Standard Occupational Classifications for the following positions:
- o *farmers, ranchers, and other agricultural managers*
- o *food scientists and technologists*
- o *soil and plant scientists*

The Economic Development Department projects a decrease of 100 positions for Napa County and a decrease of 820 positions for the Bay Area for the types of positions described above by 2028 (compared to 2018). The decrease in positions in Napa County translates into a 5.6% decrease for the industry, and the decrease for the Bay Area translates into a 6.9% decrease. The projected decrease for Napa County and the Bay Area exceed the decrease projected for California. Approximately 1,650 openings are projected each year in Napa County, while 10,720 openings are projected each year in the Bay Area (through 2028).

Program Reflection:

These occupational classifications are not aligned with the specific wine industry focus of the VWT program. Currently, the majority of VWT students are employed in the wine industry. Realistically, the program does not have enough students to fill employment needs expressed by the wine industry. Anecdotally, a significant portion of the Napa wine industry is in need of skilled employees.

B. Momentum

1.   Retention and Successful Course Completion Rates

Level	Retention Rates (Across Three Years)			Successful Course Completion Rates (Across Three Years)		
	Rate	Course Rate vs. Program Rate		Rate	Course Rate vs. Program Rate	
		Above	Below		Above	Below
Viticulture	92.1%	--	--	77.7%	X	
VWT-130	***88.4%***		***X***	***65.8%***		***X***
VWT-132	95.9%	X		***86.7%***	***X***	
VWT-134	90.1%		X	84.5%	X	
VWT-229	96.2%	X		***92.3%***	***X***	
VWT-230	95.3%	X		***87.5%***	***X***	
VWT-231	100%	X		***100%***	***X***	
VWT-232	94.6%	X		75.0%	--	--
VWT-233	92.0%		X	88.0%	X	
VWT-234	94.3%	X		83.0%	X	
Wine Marketing & Sales	***86.2%***		***X***	79.3%	X	
VWT-241	***86.2%***		***X***	79.3%	X	
Winemaking	93.9%	--	--	74.6%		X
VWT-136	***97.3%***	***X***		***68.0%***		***X***
VWT-137	97.4%	X		80.5%	X	
VWT-140	94.2%	X		82.7%	X	
VWT-147	100%	X		84.8%	X	
VWT-150	100%	X		80.0%	X	
VWT-151	94.1%	--	--	***86.3%***	***X***	
VWT-152	100%	X		88.9%	X	
VWT-153	95.3%	X		69.8%		X
VWT-154	100%	X		82.8%	X	
VWT-172	***88.0%***		***X***	70.7%		X
VWT-173	95.5%	X		80.9%	X	
VWT-180	91.0%		X	***63.8%***		***X***
VWT-190	92.3%	--	--	69.2%		X
VWT-191	91.7%		X	***50.0%***		***X***
VWT-270	90.3%		X	77.8%	X	
VWT-271	89.0%		X	68.5%		X
VWT-272	92.2%	--	--	78.1%	X	
VWT-275	93.1%	--	--	***55.2%***		***X***
VWT-280	97.9%	X		***91.7%***	***X***	
VWT-281	88.9%		X	85.2%	X	
VWT-282	100%	X		84.6%	X	

VWT-290	95.7%	X		82.6%	X	
VWT-291	100%	X		81.8%	X	
Program Level	**93.1%**			75.9%		
Institutional Level	90.3%			75.6%		

Source: SQL Enrollment Files
-- Indicates a value that is within 1% of the program-level rate.
Bold italics denote a statistically significant difference between the course-level rate and the program-level rate.
Bold denotes a statistically significant difference between the program-level rate and the institutional rate.
Note: Grades of EW (Excused Withdrawal) for spring 2020 and beyond are not included in the calculations of the three-year retention and successful course completion rates reported above. This approach reflects the standard recommended research practice of not including EWs in either the numerator or the denominator for these rates.

RPIE Analysis: *Over the past three years, the retention rate for the Viticulture and Winery Technology Program was significantly higher than the rate at the institutional level. The retention rates for VWT-130, VWT-241, VWT-172, and Wine Marketing and Sales were significantly lower than the program-level rate. The retention rate for VWT-136 was significantly higher than the program-level rate. The retention rate for the Viticulture and Winery Technology Program falls in the 62nd percentile among program-level retention rates (across 59 instructional programs, over the past three years).*

Over the past three years, the successful course completion rate for the Viticulture and Winery Technology Program mirrored the rate at the institutional level. The successful course completion rates for VWT-130, VWT-136, VWT-180, VWT-191, and VWT-275 were significantly lower than the program-level rate. Other Viticulture and Winery Technology courses (highlighted in the table) had successful course completion rates that were significantly higher than the program-level rate. The successful course completion rate for the Viticulture and Winery Technology Program falls in the 36th percentile among program-level successful course completion rates (across 59 instructional programs, over the past three years).

Over the past three years, the difference between retention and successful course completion at the program level (17.2%) was significantly higher than the difference at the institutional level (14.7%). This figure represents the proportion of non-passing grades assigned to students (i.e., grades of D, F, I, NP).

The following Viticulture and Winery Technology areas of study and courses claimed differences (between retention and successful course completion) that exceeded 10%:
- *VWT-191 (41.7%)*
- *VWT-275 (37.9%)*
- *VWT-136 (29.3%)*
- *VWT-180 (27.2%)*
- *VWT-153 (25.5%)*
- *VWT-190 (23.1%)*

> o *VWT-130 (22.6%)*
> o *VWT-271 (20.5%)*
> o *VWT-150 (20.0%)*
> o *VWT-232 (19.6%)*
> o *Winemaking (19.3%)*
> o *VWT-291 (18.2%)*
> o *VWT-172 (17.3%)*
> o *VWT-154 (17.2%)*
> o *VWT-137 (16.9%)*
> o *VWT-282 (15.4%)*
> o *VWT-147 (15.2%)*
> o *VWT-173 (14.6%)*
> o *Viticulture (14.4%)*
> o *VWT-272 (14.1%)*
> o *VWT-290 (13.1%)*
> o *VWT-270 (12.5%)*
> o *VWT-140 (11.5%)*
> o *VWT-234 (11.3%)*
> o *VWT-152 (11.1%)*

Program Reflection:

The retention and completion rates below 80% tend to align with entry level and low enrolled sections (where a single drop has a disproportional impact). As evidenced by "course fill rates," an indispensable value of the VWT program is student access; this likely plays a role in 'having a spot' for students who would generally be excluded by the system (late registration, low course caps, life uncertainty, etc).

2. Student Equity

	Retention Rates (Across Three Years)		Successful Course Completion Rates (Across Three Years)	
	Program Level	**Institution Level**	**Program Level**	**Institution Level**
African American/Black	87.5%	86.8%	67.5%	65.0%
Latinx/Hispanic			***69.3%***	72.6%
First Generation			74.2%	74.4%

Source: SQL Enrollment Files
Bold italics denote a statistically significant difference between rates at the program and institutional levels, with the lower of the two rates in ***bold italics***.
Shaded cells pertaining to retention rates indicate that statistically significant differences for those groups were not found at the institutional level.
Note: Grades of EW (Excused Withdrawal) for spring 2020 and beyond are not included in the calculations of the three-year retention and successful course completion rates reported above. This approach reflects the standard recommended research practice of not including EWs in either the numerator or the denominator for these rates.

RPIE Analysis: This analysis of student equity focuses on the three demographic groups with significantly lower retention and/or successful course completion rates found at the institutional level (vs. the corresponding rates among all other demographic groups, combined) over the past three

years. Tests of statistical significance were conducted to compare program-level and institution-level rates among the three groups listed above.

Within the Viticulture and Winery Technology Program, the retention rate among African American/Black students mirrored the rate at the institutional level.

Within the Viticulture and Winery Technology Program, the successful course completion rate among Latinx/Hispanic students was significantly lower than the rate at the institutional level.

These patterns deviate from the findings from the comparison of retention at the program vs. institutional level, where the program-level rate exceeded the institution-level rate for retention and the program-level rate reflected the institution-level rate for successful course completion. (See Section I.B.1 above).

Program Reflection:

The Viticulture and Winery Technology program is the Agriculture Program at a Hispanic Serving Institution; yet, Latinx/Hispanic students have lower successful course completion rates than the rest of campus. These are the students who are able to enroll.

Student support can be enhanced by reallocating existing resources. The majority of VWT classes serving the majority of VWT students are in the evening. Students and VWT Faculty would benefit from Instructional Assistant availability during the evening time block. This will further support the execution of faculty capstone projects and integration of learning into wine production.

VWT accessibility was addressed in a letter from the Mexican American Vintner's Association.

3. **Retention and Successful Course Completion Rates by Delivery Mode (of Courses Taught through Multiple Delivery Modes, i.e., In-Person, Hybrid, and Online)**

> *This section does not apply to the Viticulture and Winery Technology Program, as courses associated with the program were not offered through multiple delivery modes within the same academic year between 2018-2019 and 2020-2021.*

C. **Student Achievement**

1. **Program Completion**

	2018-2019	2019-2020	2020-2021
Degrees			
VWT-Viticulture: AS	6	7	8
VWT-Wine Marketing & Sales: AS	7	4	3
VWT-Winemaking: AS	8	14	8
Program Total: AS Degrees	21	25	19
Institutional: AS Degrees	**386**	**408**	**408**
Average Time to Degree (in Years)[+]			
VWT-Viticulture: AS	*	*	*
VWT-Wine Marketing & Sales: AS	*	*	*

VWT-Winemaking: AS	*	3	*
Program: AS Degrees	**4**	**3**	**3**
Institutional: AS Degrees	**4**	**4**	**3**
Certificates			
VWT-Viticulture & Enology: CoA	8	2	2
VWT-Wine Marketing & Sales: CoA	2	--	4
Program Total: Certificates of Achievement	10	2	6
Institutional: Certificates of Achievement	**349**	**308**	**496**
Average Time to Certificate (in Years)[+]			
VWT-Viticulture & Enology: CoA	*	*	*
VWT-Wine Marketing & Sales: CoA	*	*	*
Program: Certificates of Achievement	**2**	*****	*****
Institutional: Certificates of Achievement	**3**	**4**	**4**

Source: SQL Award Files

*Time to degree/certificate within the program reported among cohorts with at least 10 graduates within the academic year. Asterisk indicates that data have been suppressed.

+Average time to degree/certificate was calculated among students who completed a degree/certificate within 10 years (between first year of enrollment at NVC and award conferral year). Among 2018-2019 completers, the average time to degree/certificate was calculated among students who enrolled at NVC for the first time in 2009-2010 or later. Among 2019-2020 completers, the average time to degree was calculated among students who enrolled at NVC for the first time in 2010-2011 or later.

RPIE Analysis: *The number of AS degrees conferred by the Viticulture and Winery Technology Program decreased by 9.5% between 2018-2019 and 2020-2021. Over the same period, the number of AS degrees conferred by the institution increased by 5.7%. The Viticulture and Winery Technology Program accounted for 5.4% of the AS degrees conferred in 2018-2019 and 4.7% of those conferred in 2020-2021. The average time to degree among Viticulture and Winery Technology degree recipients ranged from 3 to 4 years, which reflects the range of the average time to degree across the institution over the past three years.*

The number of certificates of achievement conferred by the Viticulture and Winery Technology Program decreased by 40% between 2018-2019 and 2020-2021. Over the same period, the number of certificates of achievement conferred by the institution increased by 42.1%. The Viticulture and Winery Technology Program accounted for 2.9% of the certificates of achievement conferred at the institutional level in 2018-2019 and 1.2% of those conferred in 2020-2021. In 2018-2019, the average time to certificate among Viticulture and Winery Technology certificate recipients was 2 years. The average time to certificate across the institution ranged from 3 to 4 years over the past three years.

Program Reflection:

Since 2015 the VWT program has generated some of the highest graduation rates in the last 15 years—despite decreases in enrollment. There is a discrepancy between this information and previous reports pulled by the program coordinator.

2. **Program-Set Standards: Job Placement and Licensure Exam Pass Rates**

Measure	Program-Set Standard* (& Stretch Goal)	Recent Performance			
		Year 1	Year 2	Year 3	Three-Year Total
Job Placement Rate	60% (75%)	85.7%	82.1%	84.0%	84.1%
Licensure Exam Pass Rate	Licensure exams are not required for this program				
*Sources: Perkins IV Core 4 Employment data for Program (TOP Code 0104) for job placement rates (https://misweb.cccco.edu/perkins/Core_Indicator_Reports/Summ_CoreIndi_TOPCode.aspx); *Program-set standards and stretch goals reported in the table are the standards and goals established in 2019.*					

RPIE Analysis: Among Viticulture and Winery Technology Program students, job placement rates have consistently exceeded the program-set standard of 60%. Over the past three years, the job placement rates have consistently met the stretch goal of 75%.

Program Reflection:

There are more jobs than VWT students. It's critical to increase enrollment not only for program viability, but to meet the demands of the local, regional, and state wine industry.

II. **CURRICULUM**

A. **Courses**

Subject	Course Number	Date of Last Review *(Courses with last review dates of 6 years or more must be scheduled for immediate review)*	Has Prerequisite* Yes/No & Data of Last Review	In Need of Revision *Indicate Non-Substantive (NS) or Substantive (S) & Academic Year*	To Be Archived *(as Obsolete, Outdated, or Irrelevant)* & Academic Year	No Change
DISC						
DISC						

*As of fall 2018, prerequisites need to be validated (in subsequent process) through Curriculum Committee.

Curricunet is no longer accessible. The current iteration of Course Leaf does not appear to have the information to complete this section. The following tables are based on information from the Office of Academic Affairs.

		Review, BOT	Action	Prereq.	Prereq. Review, Est.
VWT-130	General Viticulture	11/14/19			
VWT-132	Vineyard Soils, Fertilizers	5/10/06	Update COR		
VWT-134	Vineyard Pruning	5/10/06	Update COR		
VWT-136	Wines of the World	4/9/15	Update COR		
VWT-137	Wines of California	4/9/15	Update COR		
VWT-140	Cultural Appreciation of	4/9/15	Update COR		
VWT-145	The Greatest Wines of th	5/8/07	Update COR		
VWT-147	The Greatest Wines of th	12/12/13	Update COR		
VWT-150	The Wines of the Napa V	12/12/13	Update COR		
VWT-151	The Wines of France	12/12/13	Update COR		
VWT-152	The Wines of Italy	12/12/13	Update COR		
VWT-153	The Wines of Spain and	12/12/13	Update COR		
VWT-154	The Wines of Germany a	12/12/13	Update COR		
VWT-172	Laboratory Analysis of M	3/11/21			
VWT-173	Sensory Evaluation of W	3/11/21			
VWT-180	Fundamentals of Enology	4/8/21			
VWT-190	Viticulture & Winery Tech	5/10/06	Update COR		
VWT-191	Viticulture & Winery Tech	5/10/06	Update COR		
VWT-229	Summer Viticulture Oper	5/10/06	Update COR		
VWT-230	Fall Viticulture Operation	5/10/06	Update COR		
VWT-231	Spring Viticulture Operat	5/10/06	Update COR		
VWT-232	Vineyard Management	5/10/06	Update COR		
VWT-233	Advanced Viticulture	11/14/19		VWT 130	F19
VWT-234	Integrated Pest Control f	11/19/19		VWT 130	F19
VWT-241	Wine Marketing	4/9/15	Update COR		
VWT-270	Advanced Winemaking	4/8/21		VWT 172, 180	S19
VWT-271	Winery Management	3/11/21			
VWT-272	Fundamentals of Wine C	5/10/06	Update COR		
VWT-275	Winery Compliance and	5/8/07	Update COR		
VWT-280	Fall Winery Operations	4/11/19		VWT 281	S19
VWT-281	Spring Winery Operation	4/9/15	Update COR		
VWT-282	Summer Winery Operati	4/9/15	Archive		
VWT-283	Cellar Master Operations	3/11/21			
VWT-288	Current Topics in Winem	4/9/15	Archive		
VWT-290	Viticulture & Winery Tech	2/13/19			
VWT-291	Viticulture & Winery Tech	5/10/06	Update COR		

B. Degrees and Certificates[+]

Degree or Certificate & Title	Implementation Date	Has Documentation Yes/No	In Need of Revision+ *and/or* *Missing Documentation* **& Academic Year**	To Be Archived* *(as Obsolete, Outdated, or Irrelevant)* **& Academic Year**	No Change

*As of fall 2018, discontinuance or archival of degrees or certificates must go through the Program Discontinuance or Archival Task Force.

[+]Degrees and Certificates cannot be implemented until the required courses in them are approved and active.

Qualification	Type	Approval, BOT	Documentation	Action
Viticulture	AS	3/12/20		
Wine Marketing and Sales	AS	3/12/20		
Winemaking	AS	3/12/20		
Viticulture and Enology	COA	3/12/20		
Wine Marketing and Sales	COA	3/12/20		
Wine Production	COA	3/10/22		
Vineyard Management	LC	5/12/22		
Vineyard Pest Scout	LC	5/12/22		
Vineyard Pruning	LC	5/12/22		
Viticulture Operations	LC	5/12/22		
Wine Laboratory Technician	LC	5/12/22		
Winery Management	LC	5/12/22		
Winery Operations	LC	5/12/22		

Program Reflection:

 Next steps are identified in the 'action' column. More information is needed to verify documentation for academic qualifications.

III.   LEARNING OUTCOMES ASSESSMENT

A. Status of Learning Outcomes Assessment

Learning Outcomes Assessment at the Course Level

	Number of Courses with Outcomes Assessed		Proportion of Courses with Outcomes Assessed	
Number of Courses	Over Last 4 Years	Over Last 6 Years	Over Last 4 Years	Over Last 6 Years

Learning Outcomes Assessment at the Program/Degree/Certificate Level

Degree/Certificate	Number of Outcomes*	Number of Outcomes Assessed		Proportion of Outcomes Assessed	
		Over Last 4 Years	Over Last 6 Years	Over Last 4 Years	Over Last 6 Years

	Course	Assessment	Action
VWT-130	General Viticulture	12/16/16	F22, In Progress
VWT-132	Vineyard Soils, Fertilizers & Irrigation	6/11/17	S23
VWT-134	Vineyard Pruning	6/22/21	
VWT-136	Wines of the World	2/7/20	
VWT-137	Wines of California	7/19/21	
VWT-140	Cultural Appreciation of Wine	2/24/20	
VWT-145	The Greatest Wines of the World	9/9/21	
VWT-147	The Greatest Wines of the New World	2/23/22	
VWT-150	The Wines of the Napa Valley	2/7/20	
VWT-151	The Wines of France	2/26/20	
VWT-152	The Wines of Italy	6/11/17	
VWT-153	The Wines of Spain and Portugal	9/23/20	
VWT-154	The Wines of Germany and Austria	6/11/17	
VWT-172	Laboratory Analysis of Musts & Wines	2/22/22	
VWT-173	Sensory Evaluation of Wine	6/22/21	
VWT-180	Fundamentals of Enology	12/16/16	F22, In Progress
VWT-190	Viticulture & Winery Technology WOE	2/22/22	
VWT-191	Viticulture & Winery Technology WOE	6/11/17	S23
VWT-229	Summer Viticulture Operations	2/7/20	
VWT-230	Fall Viticulture Operations	2/5/21	
VWT-231	Spring Viticulture Operations	6/22/21	
VWT-232	Vineyard Management	9/13/21	
VWT-233	Advanced Viticulture	9/23/20	
VWT-234	Integrated Pest Control for Grapes	3/1/18	
VWT-241	Wine Marketing	2/5/21	
VWT-270	Advanced Winemaking	2/23/22	
VWT-271	Winery Management	6/11/17	S23
VWT-272	Fundamentals of Wine Chemistry &M	6/11/17	S23
VWT-275	Winery Compliance and Recordkeepin	8/4/20	
VWT-280	Fall Winery Operations	12/16/16	F22, In Progress
VWT-281	Spring Winery Operations	6/11/17	S23
VWT-282	Summer Winery Operations	9/9/21	
VWT-283	Cellar Master Operations		
VWT-288	Current Topics in Winemaking	4/25/14	Archive
VWT-290	Viticulture & Winery Technology WOE	1/3/17	F22, In Progress
VWT-291	Viticulture & Winery Technology WOE	6/11/17	S23

Program Reflection:

Learning Outcome Assessment is current.

B. Summary of Learning Outcomes Assessment Findings and Actions

Students are making great progress in their classes.

Program Reflection:

Faculty are actively improving their courses each semester. That ongoing work is captured with LOA assessment. Overall, LOA assessment is perceived as a hurdle to class development.

IV.   PROGRAM PLAN

Based on the information included in this document, the program is described as being in a state of:

- ⭕   Viability
- ⭕   Stability
- ⭕   <mark>Growth</mark>

*Please select ONE of the above.

This evaluation of the state of the program is supported by the following parts of this report:

The state of growth is backed by nearly every quantitative metric in this program review.

Complete the table below to outline a three-year plan for the program, within the context of the current state of the program.

Program: Viticulture and Winery Technology
Plan Years: 2022-2023 through 2024-2025

Strategic Initiatives Emerging from Program Review	Relevant Section(s) of Report	Implementation Timeline: Activity/Activities & Date(s)	Measure(s) of Progress or Effectiveness
See attached unit plan.			

Describe the current state of program resources relative to the plan outlined above. (Resources include: personnel, technology, equipment, facilities, operating budget, training, and library/learning materials.) Identify any anticipated resource needs (beyond the current levels) necessary to implement the plan outlined above.

Note: Resources to support program plans are allocated through the annual planning and budget process (not the program review process). The information included in this report will be used as a starting point, to inform the development of plans and resource requests submitted by the program over the next three years.

Description of Current Program Resources Relative to Plan:

V.   PROGRAM HIGHLIGHTS

A. Recent Improvements

See section A Major Findings

B. Effective Practices

See section A Major Findings	

Feedback and Follow-up Form

Completed by Supervising Administrator:

Dr. Douglas C. Marriott

Date:

Feb. 15, 2023

Strengths and successes of the program, as evidenced by analysis of data, outcomes assessment, and curriculum:

In addition to the strengths cited by the Program Coordinator, I would cite staffing and physical infrastructure. In the past 18 months the program was able to hire both an Enologist Instructional Assistant and a Winery Operations Manager to both support instruction, and advance the viability, growth, and compliance of the commercial bonded winery that serves as a training lab for students. In addition to the bottling line cited and the replant we are collectively working on a donation from the Wine Spectator to build a "Wine Education Center" with two state of the art sensory classrooms and a new Viticulture Lab. An added recent (Dec. 2022) success was a robust Advisory Board meeting planned and deployed by the Viticulture faculty, Winery Operations Manager, and a former student now working in the industry. The meeting allowed for program (new certificates, new staff, new buildings) to be shared with industry and community partners. Recommendations from the meeting have already positively impacted the program (i.e. a student pass for tastings at select Napa wineries) and the meeting also allowed for marketing of the current offerings geared to those who work in the industry. Further qualitative success can be seen with greater alignment with our Hospitality Culinary Tourism Management program and Welding program. It should also be noted that the program went to a hybrid format during the COVID 19 pandemic that helped faculty better determine which skills required in person learning and which could be delivered online in various formats, informing the new Distance Education pilot and better serving current students.

Areas of concern, if any:

Enrollment is a concern for not only VWT but the campus as whole as we come out of the COVID 19 pandemic that limited access for many students. Spring 2023 has shown growth in certain VWT courses but as a whole there is still room for improvement. As the program serves one of the main industries in the Napa Valley alignment with industry, outreach to partners, hosting industry visits to increase visibility of the program should be welcomed to promote enrollment and collective success. Team communication, in the form of department meetings, written updates, gatherings to celebrate student and program success would allow for shared visions and advancement of the work.

Recommendations for improvement:

It is recommended there be clear and shared visions for the advancement of the program, to leverage program resources and strengths, to have annual if not bi-annual Advisory Board meetings, and market the program to community and industry we get to serve at Napa College. As the Wine Education Center breaks ground and the four year degree continues to be explored shared talking points will help advance this exciting work. It is recommended as well the exploration of expanding VWT offerings with our area high schools, and in neighboring counties that do not have this special and unique program that helps student advance in the industry.

Anticipated Resource Needs:

Resource Type	Description of Need (Initial, Including Justification and Direct Linkage to State of the Program)
Personnel: Faculty	
Personnel: Classified	
Personnel: Admin/Confidential	
Instructional Equipment	
Instructional Technology	
Facilities	
Operating Budget	
Professional Development/ Training	
Library & Learning Materials	