Program or Area(s) of Study under Review:

Summary of Program Review:

A. Major Findings

1. Strengths:
   The major strengths of engineering are:

   - The Successful Course Completion Rate for Engineering Courses/Program are higher than the respective Institutional Rate. This can be attributed to several factors. Many engineering students take advantage and engage in the opportunities to interact in and out

- Reach out and engage with local engineering industry and professionals to mentor, provide internships, and do tours. These activities will help to keep students in the program engage and will help to attract students from local high schools into Napa Valley College to enroll in engineering and then transfer.
- Broaden the area of outreach to Saint Helena and Calistoga.

I. PROGRAM DATA

A. Demand

1. Headcount and Enrollment

RPIE Analysis: The number of students enrolled (headcount) in the Engineering Program decreased by 13.5% over the past three years, while headcount across the institution decreased by 19.8%. Enrollment within the Engineering Program decreased by 12.5%, while enrollment across the institution decreased by 24.6%.

Enrollment in the following courses changed by more than 10% (±10%) between 2019-2020 and 2021-2022:

Course with enrollment increase:

- *ENGI-122 (63.6%)*

Courses with enrollment decreases:

- *ENGI-242 (-36.7%)*
- *ENGI-240 (-26.1%)*
- *ENGI-160 (-23.1%)*

Program Reflection:

The smaller decrease in head count in Engineering Program (-13.5%) versus the Institution (-19.8%) is in part attributed to the strong engagement of students in engineering courses, the support of students in extracurricular activities, working closely with student support programs such as MESA/STEM, EOPS, and TRIO Educational Talent Search. The smaller decrease in enrollm(al)10.6 (5)9 (%))0.7 (v)-2.I63.1 (ro)A629 (%))0.-1.9 (I10.6 (e)1.3 (e)-

This section does not apply to the Engineering Program, as it is not within the Career Technical Education Division.

B. Momentum

1. Retention and Successful Course Completion Rates

Retention Rates

1. Program Completion

This section does not apply to the Engineering Program, as there are not any degrees or certificates associated with the program. See Taxonomy of Program above.

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

This section does not apply to the Engineering Program, as the discipline is not included in the Perkins IV/Career Technical Education data provided by the California Community Colleges Chancellor's Office, and licensure exams are not required for jobs associated with the discipline.

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**
ENGI	110	2018	No	Non-Substantive 2023-24		
ENGI	122	2018		Non-Substantive 2023-24		
ENGI	160					

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

Program Reflection:

All Engineering courses will be submitted for Non-Substantial review. The objective is to update/revise textbooks and make other minor changes. This will be a good opportunity to update SLOs.

There is no plan to discontinue any engineering courses at the moment.

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
6	6	6	100%	100%

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

B. Summary of Learning Outcomes Assessment Findings and Actions

The Learning Outcomes Assessment results for Engineering Courses have met the established thresholds. As a general action, the engineering program should revisit the thresholds put in place for each assessment method. In addition, we need to explore ways to better assess qualitative related Student Learning Outcomes. We have found that it is more difficult to assess qualitative components of SLOs than quantitative components. Currently, we assess qualitative SLO via Response/Explain Questions in Homework Assignments and Exam, and Lab Report Write-Ups. However, we would like to know what other departments/programs are doing. This was began to be looked at in the Spring 2020; however, when COVID-19 hit this was put aside. It is time to look at it again and include learnings from online course offerings.

For ENGI 110 and ENGI 122, we plan to look at implementing before and after assessments. This way we can measure gain in these courses. Since these two courses don't have prerequisites, we think it is important to know what the gain is when students take these classes. We planned to do this beginning in the Fall 2020; however, COVID-19 got in the way.

Program Reflection:

IV. PROGRAM PLAN

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

Viability

Stability

Growth

*Please select ONE of the above.

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

- Engineering decrease in enrollment is smaller than the decrease at the Institutional level.
- Course Completion Rates for Engineering are higher than the corresponding Institutional Rates.
- Outreach decreased between Spring 2020 and Spring 2022; however, it is picking up since Fall 2022.

Complete the table below to outline a three-

V. PROGRAM HIGHLIGHTS

The program-level plan that emerged from the last review (Spring 2020) included the following initiatives:

- Effective outreach
- Increase attractiveness of program
- Search for industry support to fund some equipment needs

A.

Completed by Supervising Administrator:

Robert Van Der Velde, Senior Dean

Date:

4/2/723

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

Engineering is a solid small program, offering excellent preparation for transfer students. Student success rates are good, and higher than institutional average for equity groups. Fill rates are very good, but as the Engineering classes have lab components with cramped facilities, efficiency rates (FTES/FTEF) will never reach anywhere near the target rates for other disciplines.

Areas of concern, if any:

Enrollment in Engineering courses has dropped during the COVID pandemic, consistent with enrollment declines across campus, but leaving many Engineering sections close to class size minimums with the specter of class cancellation due to low enrollment. Pre-pandemic the program (esp. Prof. Castro) engaged in considerable outreach efforts, as well as collaboration with the MESA/STEM Center, and those efforts were yielding dividends.