

## COLLEGE OF SAN MATEO

## PROGRAM VIABILITY FORM INSTRUCTIONAL PROGRAMS

*The Program Viability process serves as the mechanism for the assessment of programs that have been identified as "at risk." Program Viability is a component of campus planning that leads to increased quality of instruction and service and to better use of existing resources. The process is an extension of Program Review and is intended to be a positive look at an at-risk program. Quantitative and qualitative data are used to review a program's academic health and ensure that the program reflects the College mission and accomplishes college, division, and program goals. Program Viability review may result in a recommendation to improve a program through minor programmatic changes, to improve a program through major programmatic changes, or to discontinue the program.*

**Name of Program: Electronics Technology**

**Division(s): Business/Technology**

**Program Viability Committee members: Christy Baird, Jesenia Diaz, Lee Miller, Arielle Smith, Christopher Walker**

**Start Date for Review: Fall 2022**

**I. DESCRIPTION OF PROGRAM** (*Data resources: CSM Course Catalogue; department records; Program Review, Strategic Plan; Educational Master Plan; ISLOs; program degree and certificate SLOs; discussions with faculty, students, and community; District sources; additional sources deemed appropriate by review committee*)

The Electronics Technology Program at the College San Mateo is directly connected to the college's Mission by following the mandate of having open access to all class offerings and current programs. The open access of courses is available to all students and community members. The only requirement is the individual meets any prerequisite needed to ensure success and a foundation to build on to best utilize the information and content presented in the program. The courses are academically comprehensive and industry compliant with the ability to develop the necessary skills and content knowledge needed to be employed in an entry-level position in the industrial electronics profession.

The Electronics Technology Program is student-focused with hands-on project-based learning that educates a diverse student population to enter the field of Industrial Electronics with a skill-set that is global in nature and scope. The program's goal is to work closely with the current and future industrial partners to improve and update curriculum to be the latest and to provide timely information needed to make our graduates attractive to hiring industries in the region. The curriculum that is presented to the students is constructed to span 14 different industrial clusters allowing completers to pursue employment in various facets of the industrial electronics job market.

The program offered 7 courses, none of which are being offered in the upcoming Fall 2023 semester.

- ELEC 111: Introduction to Electronics
- ELEC 112: Advanced Electronics Fundamentals
- ELEC 231: Basic Applied Electronics Mathematics
- ELEC 232: Advanced Electronic Mathematics
- ELEC 405: Transformers and Rotating Machinery
- ELEC 421: Fundamentals of Electric Motor Control
- ELEC 441: Sensors and Data Transmission Systems

**II. QUANTITATIVE INDICATORS AND ANALYSIS** *(Data resources: Educational Master Plan; Core Program and Student Success Indicators; additional data provided by Office of Planning, Research and Institutional Effectiveness; previous Program Review and Planning reports; other department records; assessment of student learning outcomes; additional sources deemed appropriate by review committee)*

- Electronics Technology Program Reviews (2018-2020) (2021-2022)
  - Program Overview: Electrical/Electronics Maintenance and Repair Technologies/Technicians (April 2023)

- a. Evaluate the quantitative sources with respect to enrollment, retention, and student success, including student learning outcomes. —Identify trends; determine and evaluate the (anticipated) effect of any recent or planned programmatic changes. Briefly discuss how effectively the program addresses students’ needs relative to current, past, and projected program and college student success rates. Identify and discuss any unmet student needs.

160 completers in 5 years. In 2017-18, with PG&E partnership, had 88 completers; since partnership dissolved, completion has been less than 20 each year. The Electronics Program has an Associates of Science Degree listed in the catalog, but it has not yet been awarded to any students. No student has completed all the required courses. This has been due to the absence of essential facilities to properly teach Elec 424.

- b. Analyze the productivity of this program in terms of its target load. Identify trends; determine and evaluate the (anticipated) effect of any recent or planned programmatic changes. Discuss the number of full-time and adjunct faculty, overload and reassigned FTEF, and the effect of these factors on the efficiency of the program.

Enrollment trends have declined steadily:

- In Fall 2017 - 3 of 6 courses ran under 20 students.
- Spring 2018 - 3 under 20.
- Spring 2019 - 4 of 6 under 20.
- Spring of 2020 - 5 of 6 under 20.
- Fall 2021 - 3 of 5 under 10.
- Spring 2022 - 1 of 6 under 10.
- Fall 2022 - 3 under 10.
- Since Fall 2013 fulltime faculty has been on release funding from Perkins or Strong Workforce for .1 to .6 (10%-60%). These funds are grant-funded and performance-based.
- There is a history of supplementing faculty load with grant funding. The faculty member is supposed to use release time to recruit, grow program, develop new programs, but there haven’t been demonstratable results.
- Dean Gamez switched funding from grant to Fund 1 because not completing this work actually violates grant funding terms.

- c. Does the program address students' needs with respect to equity in terms of diversity, age, and gender? Evaluate the impact of programmatic changes or other measures that have been implemented in order to improve student success or address unmet needs with respect to equity.

At one time it did serve the general population of San Mateo County. At this time it is not serving any students due to no courses being offered in the schedule for the upcoming semester.

**III. QUALITATIVE INDICATORS AND DISCUSSION** *(Data resources: OPRIE reports, Program Viability Committee research, open forums, additional sources deemed appropriate by review committee.)*

- a. Describe qualitative information obtained through surveys, campus and community forums, focus groups or other means. Discuss how this information should be used in conjunction with the quantitative data in the previous section to provide a complete picture of the program.

- Interviews conducted with primary faculty member, Steven Gonzales, and division dean, Francisco Gamez.
- Information from interviews served to contextualize the data, add content expertise to the discipline, expected trends, program challenges, etc.
- The PG&E/BART partnership ended because they brought their trainings in-house. Attempts were made by the Dean to start building new internships or partnerships, in 2019, 2020, 2021 & 2022. The faculty took no follow-up action in creating those new relationships.

**IV. SUMMARY OF DATA**

- a. Summarize the data and cite internal and external factors that clearly show the program's strengths, weaknesses, opportunities and threats.

**Program Strengths**

We don't see any current strengths at this time.

**Program Weaknesses**

Low completion of certificates or associates degrees. Two (2) in 2021 vs. 44 in the same year at Laney College. Enrollment has been trending downward since 2018 (see data attached). The one full-time faculty member is retiring at the end of Spring 2023) and no further courses are scheduled to be taught moving forward. The building housing the ELEC labs will be under renovation until Fall 2024 with no ability to use any of the facilities needed for the courses.

Program Opportunities

Students will be redirected to Skyline’s Electronics program.

Program Threats

Full-time faculty member is retiring at the end of this semester.

V. RECOMMENDATION

- a. Overall recommendation and rationale.  
Summarize the committee’s recommendation (minor programmatic change, major programmatic change, or discontinuance) and the rationale for this recommendation.

Based on the above data and analysis, the committee is recommending discontinuance of the program.

- b. Recommended programmatic changes.  
If programmatic changes are recommended by the committee, describe the proposed changes and discuss the rationale for each. (Note: If the committee recommends discontinuance, this section and sections c. and d. may be left blank. However, the committee may wish to provide recommendations for improvement to be used in the event that the committee’s recommendation for discontinuance is not accepted.)

N/A

- c. Recommended Resources.  
List the resources required to implement recommended programmatic changes, including faculty positions, classified positions, instructional equipment, instructional materials, and other requests.

Resources Requested	Rationale and Expected Outcome if Granted	Expected Impact if Not Granted
N/A	N/A	N/A

- d. Provide a plan and schedule for the assessment of recommended programmatic changes. Assessment should be completed within one year.

N/A

## VI. IMPLICATIONS OF DISCONTINUANCE

- a. If discontinuance is recommended by the committee, discuss the implications for students, faculty, staff, the College, the District and the community. (Note: If the committee recommends that the program is to be improved, this section may be left blank. However, the committee may wish to summarize the implications of discontinuing a program so that these may be taken into account as decisions are made.)

There is not a high demand for jobs in this field. The only full-time faculty member in this department is retiring at the end of Spring 2023 and the remaining adjunct faculty member is teaching at Skyline College and other community colleges in the area. There are no ELEC courses being offered in the Fall 2023 semester at the College of San Mateo.

Date of Viability report: \_\_\_\_\_

\_\_\_\_\_  
*Dean's signature*

\_\_\_\_\_  
*Date*