ANNUAL PROGRAM REPORT

SELF-STUDY *(suggested length of*

2. Due to current pandemic the new manufacturing equipment have not been utilized yet
3. Assessment and continuous improvement of the program is an ongoing process.

C. Program Changes and Needs

Overview: The industrial engineering program started in the year 2000 and had been steadily growing until 2018. During the past couple of years, we have observed a decline in enrollment. We contribute this decline in large part to the decreasing number of international students.

Since 2004 we have not hired any faculty for this program. Our last ABET accreditation review was conducted in the Fall quarter of 2015. Their findings included the fact that the program needs new faculty

B. **Program Learning Outcome(S) Assessed**

We have assessed the following SLO for the Industrial Engineering program during the 2019-20 Academic Year:

Year 1: 2019-2020	
1. *Which PLO(s) to assess*	6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. (ILO 1) 3. An ability to communicate effectively with a range of audiences. (ILO 2)
2. *Is it aligned with ILO*	Yes ILO 1, 2
3. *Sample (courses/# of students)*	INDE 410, Facilities Planning, Design and Material Handling
4. *SLO from the course*	Ability to analyze industrial facilities including location and layout of production, service, and material handling processes. Ability to design and improve industrial and service facilities. Ability to communicate and present proposals, progress reports and final group project reports.
5. *Assessment indicators*	Exams and group project reports
6. *Assessment instrument*	Program rubric
7. *Time (which semester(s))*	Spring 2020
8. *Responsible person(s)*	Prof. Motavalli
9. *Ways of reporting (how, to who)*	The results (qualitative and quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.

of exam 1. Exam 2 included questions on the use of Systematic Layout Planning process to identify the position of equipment and departments inside the facility. Final Exam was a cumulative test including all aspects of facilities planning, design and material handling systems. The summary of student performance on this outcome are on the average 82%. 4 students received 90-100%, 8 where is the range of 80-90%, and only one student scored below 70%.

PLO (3) was assessed using case studies and class team project. The project included the submission of a proposal, two progress reports and power point presentation slides. Extensive power point presentations were delivered in lieu of project reports that included research of market needs for a product, calculation of production rate, consideration of the suitability of the production of the product in the Bay Area, Economic analysis and the impact of the facility on society. The summary of student performance on these outcomes are as follows:

The student performance averages was

10 students received 90-100%,

3 students received 80-90%,

6 students received 70-80%

Recommendation for Program Improvement:

Due to campus lockdown during the spring semester, a few of student teams were not able to visit industry sponsors and collect data for their projects. Therefore, we had to provide data to the team for a specific product manufacture to design the facility. Also because fo lockdown, it was more difficult for students to meet as a teams. They tried their best to utilize zoom.

I am planning to develop several projects with data already provided for the Spring 21 offering of the course. The quality of most of the projects were acceptable to good given the circumstances.

Next Steps for Closing the Loop:

This outcome will again be assessed in the Spring semester of 2021. The results will be discussed with IE faculty and will be presented in our next Advisory Board meeting.

	designs 3) Ability to convey engineering ideas in oral and written formats 4)Ability to understand logic and inductive and deductive processes, distinguish between claims, and analyze, criticize, and advocate ideas.
5. Assessment indicators	exam question; Ethics final exam question
6. Assessment instrument	Program rubric
7. Time (which semester(s))	a-Spring 2021
8. Responsible person(s)	a-Prof. Castronovo
9. Ways of reporting (how, to who)	The results (quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
10. Ways of closing the loop	Interaction between chair, faculty and industrial advisory board

III. DISCUSSION OF PROGRAM DATA & RESOURCE REQUESTS

The industrial engineering program started in the Fall of 2000 and has been steadily growing until two years ago when we started to experience a s decline in enrollment. Some of this decline can be attributed to the reduction in international student enrollment. Since 2004 we have not hired any faculty for this program. Our last re-accreditation review by ABET was conducted in the fall quarter of 2015. Their findings included a program observation cited below, indicating that the program needs new faculty members to stay current. We have not been given a tenure track positions since the accreditation visit. We have to address this observation before the next accreditation visit in the fall of 2021.

Discussion of Trends & Reflections

The following table is enrollment data extracted from Pioneer Data Warehouse. This data indicates that the Industrial Engineering enrollment has decline to around 80 for Fall of 2019. The current enrollment is 78 undergraduate students. The current faculty of Industrial Engineering are;

4. Maintaining accreditation

Reflections on Trends and Program Statistics:
Nationally the industrial engineering programs draw students from other majors in the colleges of engineering. Such that student enter other more recognized engineering programs such as mechanical, electrical or civil engineering and then transfer to industrial engineering. Therefore, typically freshmen enrollment in IE is low. We do not have that opportunity at CSU East Bay, as we are not offering those main stream-engineering degrees. However an enrollment of around 100-150 is an average number for an IE program nationally.

Request for Resources*:* We have upgraded the manufacturing laboratory and are in discussion with the IT Department to upgrade the Engineering Computer Lab. This upgrade was interrupted by the pandemic.

Request for Tenure-Track Hires: We have to add a tenure-track faculty within the next 2 academic years to keep the program current and satisfy the accreditation requirements.

Request for Other Resources:

N/A