

CAPR 5 Year Review Report for Industrial Engineering

The Industrial Engineering Program was visited by ABET, October 2015 and the accreditation was extended till September 30, 2018. The following is the final ABET statement:



Engineering Accreditation Commission Summary of Accreditation Actions
for the
2015-2016 Accreditation Cycle

8/12/2016

**California State University, East
Bay
Hayward, CA**

Industrial Engineering (BS)

Accredit to September 30, 2018. A request to ABET by January 31, 2017 will be required to initiate a reaccreditation report evaluation. A report describing the actions taken to correct shortcomings identified in the attached final statement must be submitted to ABET by July 01, 2017. The reaccreditation evaluation will focus on these shortcomings. Please note that a visit is not required.

1. Development Plan

The program evaluators identified one weakness about the program that we have to resolve before July 1 2017. We have to submit an interim report specifically addressing the weakness. The following is the ABET statement.

“Criterion 5. Curriculum This criterion states that students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints. Several design projects were provided as part of the display materials. Other than financial analysis to address cost constraints, the reports did not contain documentation indicating that other constraints were considered. The faculty member who supervises the major design experience indicated that students discuss constraints and standards in their project meetings, but do not document the discussion; this could not be substantiated with the students. Thus based on available evidence, it appears that the major design experience does not routinely incorporate multiple realistic constraints. Hence, strength of compliance with this criterion is lacking.

Seven-day response: The EAC acknowledges receipt of documentation concerning constraints incorporated in major design projects. This information will be considered in due process.

- The weakness remains unresolved.
- 30-day due-process response: No additional information was received during the due process period. Information received with the seven-day response included excerpts from major design projects highlighting additional factors, other than financial, that students were charged with considering in the project. However, documentation of how these considerations were incorporated into the design process or used to compare alternatives is lacking.
- The weakness remains.
- Post 30-day due-process information: The EAC acknowledges receipt of additional documentation, consisting of major design reports for the previous semester. While the student projects cited constraints in the reports, some projects incorrectly identified constraints and thus did not incorporate multiple realistic constraints appropriately. For example, some projects identified logistical challenges the team faced in completing the project as a constraint.
- The weakness is unresolved and will be a focus of the next review. In preparation for this review, the EAC anticipates documentation providing evidence that multiple realistic constraints were appropriately incorporated in the major design projects.

Program Observation

1. The School of Engineering indicated that it plans to open a search for an additional faculty member to support the BS and MS programs overseen by program faculty.”

5-Year Plan:

1. Summary of program changes: The major change will be the transfer to a semester based program. The Industrial Engineering curriculum has been transformed in such a way that it both satisfies the accreditation requirements and will produce technically stronger graduates. This has been accomplished by fundamental changes to courses, teaching methods and course requirements.

2. Faculty: As mentioned in ABET review above, we have to address their observation before the next visit.
3. Research: The Industrial Engineering faculty are active in research and are being successful in securing funds for their research. The faculty plan is to aggressively pursue funding opportunities, specifically in areas related to the advancement of engineering education.
4. Laboratory Development: Room SCS 247, Materials Testing Laboratory, is being remodeled to a lab-lecture room with a capacity of 36. We are requesting flexible furniture to use the room for team projects and other active learning practices.
5. Equipment: Through A2E2 annual funding and the normal refresh cycle of computers by IT we are keeping the Industrial Engineering Laboratories current.
6. Enrollment: Student enrollment in Industrial Engineering program has remained steady in recent years.
7. Excess credits: The program requires 192 credit hours to complete. The exemption for Engineering has been approved by the University and allowed by the Chancellor's Office. We have kept the program requirements at the minimum level needed for accreditation.