BSIT

Annual Program Report Template

Year:	2019- 2022 Improvements
Program:	BS Industrial Technology
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Summary of Continuous Improvement Efforts since Last Report

Provide a brief description of how assessment results have been used for program improvement. Point to a specific example of how an assessment provided the program with data it could use for improvement and what that improvement was, if possible, also show evidence of the improvement. You may look at data from the two previous academic years to support this case.

Respond here:

1. Issues with using figures and list

Identification: The

new book had been introduced as a supplementary book and new slides had been added to the course. One of the authors of the new book is the course instructor.

Result of Improvement: The quality of the project deliverable significantly improved. Students were very satisfied with the addition of the material.

Identification 1: PLC (Programmable Logic Controller) is the brain of the automated industrial control systems and is an important chapter in the course. Prior to 2020, a low-cost PLC Trilogi (made in Canada) was adopted due to the free software license it offered to students. But the software was outdated, and not widely used in industry.

Improvement 1: In 2020, the instructor decided to use a much more popular Allen-Bradley MicroLogix1100, an entry level, but extremely popular industrial PLC as the lab equipment, and developed a teaching panel equipped with the PLC and various I/Os. Detailed instruction of download, installation and configuration of a complete programming/debugging/simulation environment was shared with students in blackboard, which consists of RSLogix 500, RSLogix 500 Emulate & RSLinx, and all of them are free for educational purpose. Students had exposure to the latest and industrial standard PLC hardware and software.

Results of improvement 1: The quality of the answers to the homework assignments on PLC programming was significantly improved. Students seem to be more motivated to learn, knowing that the technology was widely used in industry.

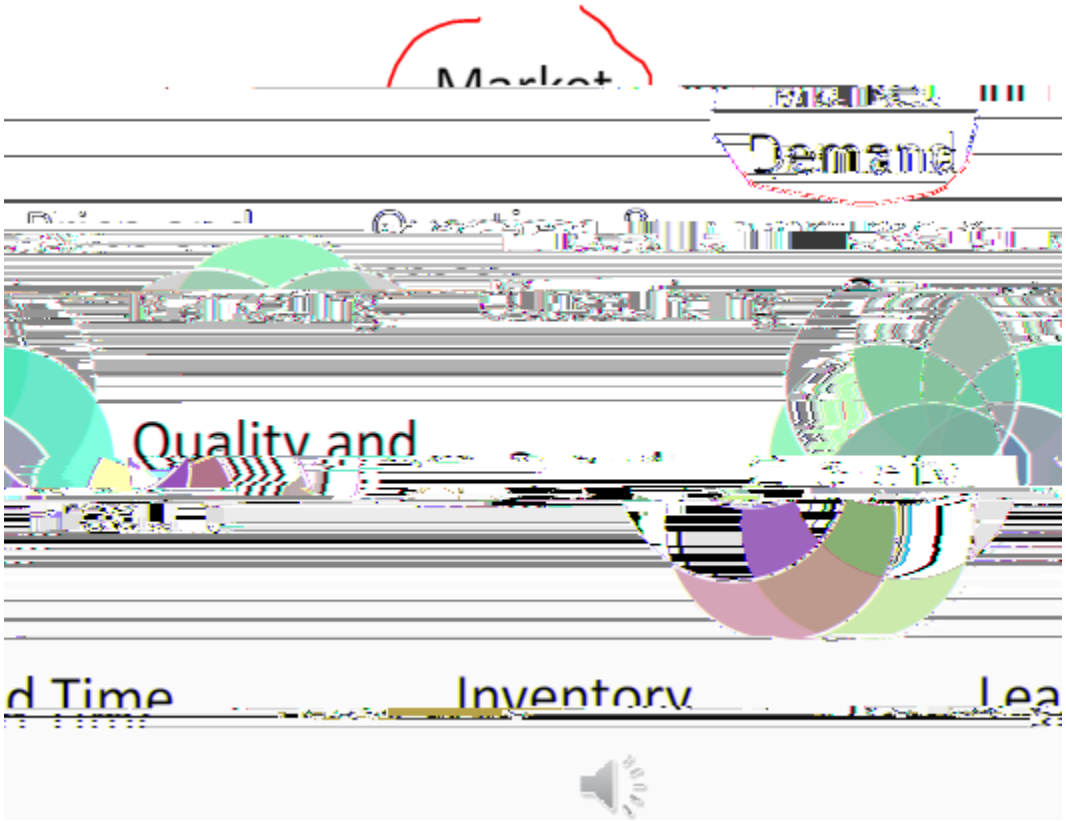
Identification 2: Distributed Control Systems (DCS) is widely used in the local petrochemical industries and is the forefront of the development in automation control at system or plant level. In the past, the course only conceptually discussed Distributed Control Systems (DCS) and Supervisory Control and Data Acquisition (SCADA) with no lab for it.

Improvement 2: With the establishment of the Emerson Advanced Technology Lab in November 2021, we have the latest Emerson DeltaV DCS system and the Performance Learning Platform (PLP) installed on campus. The PLP platform pumps water from tank 1 to tank 2 and measures flow, tank level, pressure and temperature through Rosemount, Micro Motion and Fisher devices controlled by the newest DeltaV PK controller. The instructor took the advantage of the access to the latest DCS system, and developed two lab sessions for the students, to give students hands-on experience on configure and control of DCS.

Results of improvement 2: The labs were well received by students. Some students expressed strong desire to learn1182 0 3(r)tc(t)-4(he)3( )6(st)-4(udI(t)-utq0.

Identification: The lecture talks about individual ways to make supply equal demand, but do not fully describe how you can use multiple approaches to achieve this goal. Also, the interrelationships between lead time, inventory, price, capacity and demand were not fully presented.

Improvement: I redesigned several lectures in the course including the introduction lecture to discuss multiple ways to make supply equal demand. The theme is now the multiple ways to make supply equal demand with one lecture on price (revenue management) and marketing. I introduce this theme in the first lecture the slide appears in multiple lectures.



Result: The student evaluations in the course are generally positive and the change did not impact the evaluations.

11. F2.08 Requirements for Continuous Improvement

Identification: Faculty were not documenting improvements in courses.

Improvement: Required faculty to document improvements in annual performance review (F2.08) under teaching section. For year 1, I asked all faculty to go 4 years back. In future years, new improvements plus tracking results of existing improvements will be included. The improvements are used a significant part of the annual evaluation (teaching section is 50% for most faculty).

Result: Documented 30 pages of course level improvements. These improvements are shared among the faculty to share best practices and understand updates in courses at the instructor level.

Program Highlights Since Last Report

Identify and briefly discuss any programmatic curriculum changes made since the last report (e.g. new courses, course changes, SLO changes, course deletions).

Respond here: Added a special topics course (INEN 4399: ST International Logistics and INEN 4399: ST Logistics Geography).

Table 1. Assessment Results and Analyses for Current Cycle.

STAGE 1: PLAN				STAGE 2: DO		STAGE 3: STUDY
Departmental Student Learning Goal	Program Student Learning Outcome	Assessment	Assessment Method/Location	Benchmark Expectations	Data Results	Actions/Goals Based on Data Results* What do the data tell you? How will you use this data? How were data from the last cycle used to make changes during this cycle, and What were the results of those changes?
Industrial technology knowledge application	1 . Understanding of Engineering Management	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Rate on Likert scale 4- Good, 3 - Average, 2 - Marginal, 1 - Unacceptable At least 60% of students must be in the good and average ranking. At least 80% of students must be in the good, average, ma 367.03 Tmc7 4		

Written, oral and graphical communication	1. Grammar	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 3 Marginal and Unacceptable = 10% Unacceptable = 0%	
Written, oral and graphical communication	2. Document Organization	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 2.2 Marginal and Unacceptable = 90% Unacceptable = 0%	An improvement plan was added for INEN 3300 and INEN 3360 to teach students the importance of lists and graphics in reports. These improvements will be made in fall 2023 and Spring 2024.
Written, oral and graphical communication	3. Conclusion / Summary of Information	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 2.8 Marginal and Unacceptable = 30% Unacceptable = 0%	
Written, oral and graphical communication	4. Effective use of pictures, graphs and tables	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 1 Marginal and Unacceptable = 100% Unacceptable = 100%	An improvement plan was added for INEN 3300 and INEN 3360 to teach students the importance of lists and graphics in reports. These improvements will be made in fall 2023 and Spring 2024.
Written, oral and graphical communication	5. References	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 2.8 Marginal and Unacceptable = 20% Unacceptable = 0%	
Analyze and interpret data, and use engineering judgment to draw conclusions	1. Evaluate where an engineering management methodology can and cannot be used.	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 3.1 Marginal and Unacceptable = 20 % Unacceptable = 0%	

Analyze and interpret data, and use engineering judgment to draw conclusions	2. Discuss the advantages and disadvantages of an engineering management methodology.	Student work in INEN 4315 (final report)	Review of Work by faculty who do not teach the course / Online	Same as above	Average = 3.3 Marginal and Unacceptable = 20% Unacceptable = 0%	

Table 2. Continuous Improvement Results Since Last Report

Stage 4: ACT		
Actions/Goals Based on Data Results **Copy last cycle's actions/goals and report on progress toward continuous improvement on those here.*	Status *C=Complete* *P=Progressing* *N=No Action Taken*	Discussion of Status *If C, describe efforts that led to accomplishment of actions/goals.* *If P, provide update on progress made toward accomplishing actions/goals and what tasks*