Engineering Technology BS

Develop Knowledge And Safety Skills

Goal Description:

Students will learn the skills necessary to compete in the professional marketplace. This course provides an opportunity for students to gain an increased understanding and knowledge of safety consciousness, safety precautions and procedures in an industrial environment.

Providing Department: Engineering Technology BS

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Development Of Students Knowledge And Skills

Learning Objective Description:

Students will demonstrate competency in key areas of engineering technology by passing the OSHA Safety Course and receiving OSHA Certification. The OSHA Certification serves as a capstone requirement. The test is administered by an external agency.

RELATED ITEM LEVEL 2

ETSM 4382- OSHA Certification

Indicator Description:

All students enrolled in the program must complete ETSM 4382 and receive their OSHA Certification in Safety. The course addresses key concepts and skills relevant to safety in the field of Engineering Technology. Each semester, all students are required to take the OSHA Certification examination as the capstone activity for the course. The certification exam is divided into multiple sections. An overall grade of 70% or higher is passing.

Criterion Description:

There is a consensus that at least 80% of the students taking the OSHA examination will make a 90 or higher on the exam, while, 100% will be certified by making a score of 70 or higher. A score of 90 or higher indicates comprehension of key concepts and elements of industrial safety management.

Findings Description:

Based on feedback from the Industrial Advisory Board (IAB) of the Industrial Safety Management minor during the Fall 2021 and Spring 2002, the curriculum plan has been updated with revisions to meet with the market needs. The revisions are completed for the 2022-2023 Catalog.

RELATED ITEM LEVEL 3

ETSM 4382- OSHA Certification

Action Description:

Continue the practice to consult with IAB members for feedback about the program and curriculum.

- Various federal, state, and local safety standards, regulations, and codes, such as OSHA 1910 general safety regulations, OSHA 1926 construction safety standards and facilities safety codes were covered in related courses.
- Students were given the opportunities to examine safety standards, regulations, and codes and then apply in industrial setting by completing term projects. An average grade of B is expected.

Develop Professional Skills

Goal Description:

Students will learn the skills necessary to compete in the professional marketplace.

Providing Department: Engineering Technology BS

RELATED ITEMS/ELEMENTS

RELATED ITEM LEVEL 1

Demonstrate Professional Skills

Learning Objective Description:

Students completing the BS in Engineering Technology will gain experiental learning and field experience in the industry through an internship necessary to successfully gain employment.

RELATED ITEM LEVEL 2

ETEC 4391 Internship Evaluation

Indicator Description:

All students enrolled in the program must complete ETEC 4391 in their third or final year (Junior or Senior) of enrollment. ETEC 4391 addresses key concepts and skills, as well as practical demonstrations of competency relevant to the field of each program in the Department of Engineering Technology. Each semester interns will be evaluated by their internship supervisor and by their faculty supervisor on a faculty-developed rating scale.

Students need to meet the below student eligibility to register ETEC4391 for 3 credits or 6 credits.

1. Minimum semester hours - 32 hrs. Including 15 within the academic major/minor. Some internships may specify courses / content to have been completed.
2. Must be a student in good academic standing at SHSU.
3. Minimum grade of “C” or higher in ENG 1301 and 1302 or equivalent.
4. Transfer students become eligible upon the successful completion of one full-time semester if all other eligibility requirements are fulfilled and apply according to instructions on announcements.
5. Special information regarding Industrial Technology Trades and Industry Certification Program internships (ETEC 4391) - Due to the unique structure of this program, the above listed eligibility requirements do not apply. See the Trades and Industry Certification Program coordinator regarding specific requirements for this program.

The students in ETEC 4391 in Summer 2020 were evaluated by the following detail rubric:

COURSE EVALUATION – GRADING: 100 POINT SCALE

Weekly Reports [10 weekly reports]	20 Points
Summary of Syllabus	3 Points
Resume	3 Points
LinkedIn	2 Points
EMAIL Communication Skills	2 Points
ONLINE Video Review and Summary (1 video)	10 Points
FINAL SUMMARY PAPER	20 Points
FINAL SUMMARY PRESENTATION	20 Points
Supervisor's Evaluation	15 Points
Supervisor's working hour verification letter	5 Points
TOTAL	100 Points

Grade Scale - Final grades will be based upon the following points.

Your final numerical point will ROUND OFF to THE NEARNEST WHOLE NUMBER.

A = +90 Points

B = 80 – 89 Points

C = 70 – 79 Points

D = 60 – 69 Points

F = under 60 Points

Criterion Description:

It is expected that at least 85% of the students enrolled in ETEC 4391 will achieve above average standard (B or higher) of performance on the supervisor evaluation rating scale and the final letter grade. In general, if the students in ETEC 4391 miss to submit any assignments, the assignments not submitted will impact their final grades by two letter grades.

All assignments should be submitted to Blackboard by the specific due dates as below.

Assignments	Due Dates
10 Weekly Reports	By Midnight, Every Following Sunday i.e.: The 1st Weekly Report (May 28-30) - By Midnight, May 31, 2020
Summary of Syllabus	By Midnight on May 31, 2020
Resume	By Midnight on May 31, 2020
LinkedIn	By Midnight on Jun. 7, 2020
Online Video Review and Summary (1 Video)	By Midnight on Jul. 28, 2020
EMAIL Communication Skills	No due date. (Based on the communication between a student and the instructor)
Final Summary Paper	By Midnight on Jul. 26, 2020
Final Summary Presentation	By Midnight on Jul. 26, 2020
Supervisor's Evaluation	By Midnight on Jul. 20, 2020
Supervisor's working hour confirmation letter	By Midnight on Jul. 20, 2020

Findings Description:

There were 51 Engineering Technology students enrolled in ETEC4391-01 and/or 02 in Summer 2021. The number of students in ETEC4391-1 and/or 2 in Summer 2021 was gently increased compared to the previous year even if we are still under COVID-19. Most students successfully completed this course. The summary of our findings in relation to the learning objectives is shown in the below table.

Summarized Students' Course Achievements in ETEC 4391	
Directly supported learning objectives and student outcomes:	-Students completing the BS in Engineering Technology will demonstrate skills necessary to compete in the professional marketplace through an internship. 1. Work in an Industrial Environment. 2. Work in either a Field Management, a Construction Management, a Superintendent Management, Project Management, Safety Management or combinations of responsibilities. 3. Exhibit characteristics associated with successful employment in industry.
	-Students will establish a professionalism to be ready to start their successful careers in each professional field through an internship. 4. Develop the required reports and maintain progressive reviews that identify the progress being made on the project. 5. Supervise workers in the various trades that are under their responsibilities. 6. Write change orders on specification sheets. 7. Prepare project documents and resources to support the activities for a project.
	-Students will improve their written, oral, and graphical communication skills with stakeholders in each professional field to maintain professional working relationships. 8. Communicate with subcontractors and maintain professional working relationships 9. Write and maintain punch list and other required documentation.

Student's internship supervisors submitted their supervisor's evaluations with their evaluation rating scale and observations to a course instructor, and the evaluation rating was determined by immediate student's internship supervisor using 5 rating scale from A to F and it was based on the performance of internship student at their jobsite during their internship program. 94.1% of internship students received 'A' from their supervisors and 3.9% of internship students received 'B'. Only one internship student, 2.0%, received 'C' in Summer 2021. Therefore, 98% of internship students achieved higher rating, A or B, and the percent was higher than the target percentile of ETEC4391-1 and/or 2 in summer 2021. In addition, 98% was slightly higher than the percentile of internship students who received A or B from their supervisors in summer 2020.

Most of students completed the course in Summer 2021 and they successfully received above average final letter grade at the end of semester. The summary of the distribution of final letter grade is as follows: 90.2% of students in ETEC4391-01 and/or 02 students achieved above the average final letter grade, and the percentile is higher than the target of criterion, at least 85% of the students enrolled in ETEC 4391 will achieve above average standard ('B' or higher). 3.9% of students achieved 'C' and 5.9% of students achieved 'D'. Overall, the percentile of internship students who received above average standard was improved in Summer 2021. The below table indicates the distribution of final letter grade of ETEC4391-01 and/or 02 in summer 2021.

Final Grade of ETEC4391-01 and/or 02 in Summer 2020	Percentile (%)
A	84.3%
B	5.9%
C	3.9%
D	5.9%

RELATED ITEM LEVEL 3

ETEC 4391 Internship Evaluation

Action Description:

Continue to utilize internships and other opportunities such as service projects to develop professional industrial skills

Update to Previous Cycle's Plan for Continuous Improvement Item

Previous Cycle's Plan For Continuous Improvement (Do Not Modify):

Closing Summary

Referring to the feedback from the Industrial Advisory Board (IAB) of the program, the faculty in the department will continuously review the curriculum to meet the challenges and demands from industries the program serves. Also, the department will actively promote and recruit more students for the program.

Update of Progress to the Previous Cycle's PCI:

The faculty in the Department of Engineering Technology will continue to assess the learning objectives of development and demonstration of professional skills to ensure that all Engineering Technology students will be ready to successfully start their careers in a professional industrial environment. We will continuously academically and practically support our Engineering Technology students to meet or exceed our target percentile, 85% above average rating (B or higher) of performance on the supervisor's evaluation and final letter grade during Internship

New Plan for Continuous Improvement Item

Closing Summary:

The faculty in the program will continue to address the observations regarding the needs to add a dedicated course to the existing curriculum addressing construction law and recruitment of additional full-time faculty with the increasing students majoring in this program.