# 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 3386- OSHA Certification**

**Indicator Description:**

All students enrolled in the program must complete ETSM 3386 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 2023 and Spring 2024, the curriculum plan has been updated with revisions to meet with the market needs. The revisions are completed for the 2024-2025 Catalog.

RELATED ITEM LEVEL 3

**ETSM 3386- 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 experiential 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 21 within the academic major for your degree program or the 15 within the academic minor for your minor program. Some internships may specify courses / content to have been completed.
2. Minimum grade of "C" or higher in ENG 1301 and 1302 or equivalent.
3. 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.
4. 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 2023 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 Date |
|---|---|
| 10 Weekly Reports (Weekly Logs)<br>(6/1/2022 – 8/2/2022: 10 weeks) | By Midnight, Every Sunday<br>i.e. The 1st Weekly Report (5/29/2023-6/2/2023)<br>→ By Midnight, 6/3/2023 (Sunday) |
| Summary of Syllabus | TBD |
| Resume | TBD |
| LinkedIn | TBD |
| ONLINE Video Review and Summary (1 Video) | TBD |
| EMAIL Communication Skills | No due date. (Based on your email communication between a student and an instructor) |
| FINAL SUMMARY PAPER | TBD |
| FINAL SUMMARY PRESENTATION | TBD |
| Supervisor's Evaluation | TBD |
| Supervisor's working hour verification letter | TBD |

**Weekly Reports are due Midnight, Every Following Sunday:**

Follow and use the format as posted on Blackboard.

Don't modify the template and fill in every required information on the format.

Please describe your daily activities as specific as you can like the sample.

If your internship begins before the semester, please fill out your daily activities to the attached template and submit your weekly reports to the first week of summer semester.

For instance, if your internship begins 5/15/2023, please write 2 weekly reports from 5/15 to 5/19 and from 5/22 to 5/26 and submit 2 weekly reports with the 1st weekly report (5/29-6/2) to the folder of the 1st weekly report.

**Resume:**

Example will be on Blackboard – follow the example closely. Upload all your Weekly Reports to ETEC4391-1 on Blackboard before or on due date posted on Blackboard.

**LinkedIn Profile:**

You will develop a professional LinkedIn profile as a requirement for ETEC 4391, and you should update your profile including your current internship. And then please link your profile to Dr. Min Jae Suh and the LinkedIn page of "Sam Houston State University - Engineering Technology".

**Summary of Syllabus:**

This course is an online course, and the course instructor confirms that students read a course syllabus carefully or not. Students summarize key points or core contents after reading the course syllabus.

**Email Communication Skills:**

When you send your email properly and professionally to a course instructor. One of the purposes of this courses is to improve your professional commination skills. Additionally, the email is the best way to communicate between the instructor and the student because this is ONLINE courses. Please check your school email once a week at least!

**Video Review and Summary:**

An announcement/notification will be posted to ETEC4391-1 on Blackboard including the link to the video. You will watch the videos and summarize the video topics. 1-page summary should be uploaded before or on the due date to Blackboard.

**Supervisor's Evaluation:**

Download the Supervisor Evaluation from Blackboard. Have your immediate supervisor complete the evaluation and email it to Dr. Min Jae Suh, mjs068@shsu.edu

**Supervisor's Working Hour Verification Letter:**

The letter should include student's total working hours at a jobsite to verify complete student's working hours and potential future working hours to meet 300 working hours or 600 working hours. The letter should be prepared by student's supervisor or HR and include his/her signature in the letter. There is no specific format, but you can find samples for this letter.

Based on your working hour verification letter, I can confirm you can make 300 working hours or 600 working hours during your internship before or after Summer 10 Semester.

Please see the samples!

**Final Summary Paper:**

Submit a 2-3 page, 1.5-spaced paper. The paper should describe the history of the company in which you are interning, the job title and description for your position, the actual activities / duties / job tasks you completed while interning and your personal thoughts of the internship such as pros and cons.

**Final PPT or Video Presentation:**

Create a Power Point presentation that illustrates your internship experience. You will need to include pictures showing the projects / activities you performed.

Upload the presentation file to Blackboard on or before the due date.

OR

Create a 4-5 minute video that describes your experience using a self-recording.

For both of the presentations you need to identify the company, job title, skills you learned, location, travel expected, activities and/or duties you preformed, and pros and cons of your internship. Also include examples of the classes you have taken that supported your experience and skills you think should be included or added to the courses of your major.

**Findings Description:**

There were 68 Engineering Technology students enrolled in ETEC4391-01 and/or 02 in Summer 2023. The number of students in ETEC4391-01 and/or 02 was increased by one student. Most students successfully completed this course in Summer 2023. The summary of our findings in relation to the learning objectives is shown in the below table.

| Summarized Students' Course Achievements |
| --- |

| | |
|---|---|
| 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.<br>1.Work in an Industrial Environment.<br>2.Work in either a Field Management, a Construction Management, a Superintendent Management, Project Management, Safety Management, or combinations of responsibilities.<br>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.<br>4. Develop the required reports and maintain progressive reviews that identify the progress being made on the project.<br>5. Supervise workers in the various trades that are under their responsibilities.<br>6. Write change orders on specification sheets.<br>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.<br>8.Communicate with subcontractors and maintain professional working relationships<br>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. 93% of internship students received 'A' from their internship supervisors and 6% of internship students received 'B'. Therefore, 99% of students in this course achieved A or B from their internship supervisor at their internship employers. Only one student out of 68 students could not receive student's supervisor's evaluation from a supervisor. The percent in Summer 2023 was almost the same as Summer 2022 and the percent was higher than the target percentile of ETEC4391-1 and/or 2 in summer 2023.

99% of students completed the course in Summer 2023 and 91% of students successfully received above average final letter grades, A or B, at the end of semester. The summary of the distribution of final letter grade is as follows: 91% 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). 4% of students achieved 'C', 3% of students achieved 'D', and 1% of students could not pass this course in Summer 2023. Overall, the percentile of students who received above average standard (B or higher) was almost similar with Summer 2022.

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. To improve of this course, a course instructor considers student's professionalism at their workplaces and work ethics. That is the reason why the instructor wants to see their communication skills and weekly logs as one of assignments. Also, the instructor wants to see their professional writing skills and presentation skills through weekly logs, final presentation, and final reports. The instructor tries to develop online supervisor's evaluation form to provide more convenience to student's supervisors and improve the efficiency to integrate supervisor's feedbacks for our students

## Update to Previous Cycle's Plan for Continuous Improvement Item

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

**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.

**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.