# **Industrial Safety Management Minor**

# Development of Environmental, Health, and Safety Awareness

# **Goal Description:**

Through EHS awareness, the safety professional will have a broader understanding of Government Agencies Regulations and Standards to thrive in the Industrial Industry setting and promote a healthy and safe work environment. <u>Up-to-date tools and procedures are referenced to properly perform various job functions and meet all governmental regulations.</u>

# Providing Department: Industrial Safety Management Minor

RELATED ITEMS/ELEMENTS -----

RELATED ITEM LEVEL 1

# Develop an understanding of Ethical and Human Factors within the Industry Learning Objective Description:

To utilize techniques of Human factors and Human resources engineering technology in order to resolve ethical and social responsibilities in the Industrial sector. The Safety Professional will be able to resolve moral errors and enforce company policies by understanding Government regulations and Standards.

**RELATED ITEM LEVEL 2** 

# Industrial Standards, Regulations, and Hazard Awareness Indicator Description:

All students enrolled in the Industrial Safety Management (ISM) minor are required to complete ETSM 3386 and demonstrate proficiency in safety management skills through writing-based assignments. Each semester, selected assignments from students in this course will be reviewed by faculty with expertise in safety management. Faculty members will score the assignments using a scale of 1 - 5, with 3 indicating "meets expectations," 4 "exceeds expectations," and 5 "far exceeds expectations."

## **Criterion Description:**

The goal is for at least 70% of the students enrolled in ETSM 3386 to achieve a score of 3.5 (meets standards) or higher.

# **Assignments and Grading**

**Assignments:** The course includes discussion boards, writing assignments, quizzes, a midterm exam, and a final exam. These assignments are designed to evaluate students' understanding and application of safety management principles. **Final Grading:** Letter grades are based on the distribution of points earned throughout the course:

•A: 90 - 100%

•**B**: 80 - 89.9%

**•C:** 70 − 79.9%

**•D:** 60 − 69.9%

## **Activity Points and Weight:**

Discussion Board: 11 activities, 1100 points, 5%
Writing Assignments: 10 activities, 1000 points, 25%

•Quizzes: 4 activities, 400 points, 20%
•Midterm Exam: 1 exam, 100 points, 25%
•Final Exam: 1 exam, 100 points, 25%

•Total: 2700 points, 100%

## **Findings Description:**

## **Future Goal:**

We will continuously improve our data collection and analysis processes using Blackboard to ensure that at least 70% of students achieve a score of 3.5 (meets standards) or higher on their writing-based assignments.

## **Supporting Documents:**

- •Planned Summary of Exam Results: To be collected and anonymized using Blackboard
- •Planned Practicum Evaluation Summaries: To be collected and anonymized using Blackboard
- •Planned Year-over-Year Comparison Reports: To be compiled from Blackboard data

## ETSM 3386 Assessment Rubric

ETSM 3386 Assessment R	ubric				
Criteria	Unsatisfactory (1)	Developing (2)	Satisfactory (3)	Exemplary (4)	Score (1-5)
Knowledge of Science (SO-1.2)	Does not recall or incorrectly applies principles of chemistry	Repeats aspects of science demonstrated in instruction	Repeats aspects of science demonstrated in instruction	Identifies applicable science and manipulates or combines it to	
,	or physics.	with frequent errors.	with few errors.	achieve a solution with almost no errors.	
Knowledge of Business	Does not recall or incorrectly	Repeats business concepts	Repeats business concepts	Employs business as a tool in	
(SO-1.3)	applies principles of	demonstrated in instruction	demonstrated in instruction	problem solving with almost no	
	management and business.	with frequent errors.	with few errors.	errors.	
Technical Processes	Difficulty in understanding	Basic understanding of	Competent in understanding	Advanced and innovative	
(SO-2.2)	technical processes.	technical processes.	and applying technical processes.	application of technical processes.	
Technical Management	Struggles with concepts of	Basic understanding of	Competent in technical	Advanced and innovative in	
(SO-2.3)	technical management.	technical management.	management skills.	technical management.	
Spreadsheet/Database	Limited ability in using	Basic use of spreadsheet and	Proficient use of spreadsheet	Advanced and innovative use of	
Use (SO-3.4)	spreadsheet and database tools.	database tools for tasks.	and database tools in	spreadsheet and database	
			complex scenarios.	applications.	
Technical Report Writing	Poorly structured and unclear	Basic report writing with	Clear and coherent technical	Exceptional and persuasive	
(SO-4.1)	reports.	some clarity issues.	reports.	technical report writing.	
Electronic Presentations	Ineffective electronic	Basic electronic	Engaging and informative	Advanced, creative, and impactful	
(SO-4.2)	presentations.	presentations with clear content.	electronic presentations.	electronic presentations.	
Verbal Presentations	Difficulty in delivering clear	Adequate verbal presentation	Clear and effective verbal	Exceptional verbal presentation	
(SO-4.3)	verbal communication.	skills.	communication.	skills with persuasive delivery.	
Team Participation (SO-	Limited participation in team	Adequate participation and	Effective and collaborative	Outstanding contribution and	
5.2)	situations.	contribution in group projects.	participation in team situations.	leadership in group projects.	
Ethical Problem Solving	Fails to recognize ethical	Identifies ethical issues but	Effectively identifies and	Exceptionally identifies and	
(SO-6.1)	issues.	struggles with solutions.	suggests solutions for ethical	innovatively suggests solutions for	
			problems.	complex ethical dilemmas.	

RELATED ITEM LEVEL 3

# Industrial hazards and associated safety standards Action Description:

## **Action Description:**

To improve the Industrial Safety Management minor based on analysis of assessment findings and/or KPI results, the following specific actions will be taken over the 2024-2025 academic year:

## 1. Enhancement of Curriculum Content:

•Action: Integrate additional modules focusing on emerging industrial hazards and associated safety standards, including the addition of the OSHA -10-hour course to enhance hazard awareness among students.

•Responsible Person: Lead Instructor

•Completion Date: June 2025

# 2. Faculty Development Workshops:

•Action: Conduct faculty development workshops to ensure instructors are up-to-date with the latest industrial safety standards and teaching methodologies.

•Responsible Person: Instructors

•Completion Date: Ongoing

## 3. Implementation of Continuous Monitoring System:

•Action: Establish a system to continuously monitor student performance and understanding of industrial hazards and safety standards through regular assessments and feedback mechanisms.

•Responsible Person: Lead Instructor•Completion Date: December 2024

## 4. Improvement of Assessment Methods:

•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

•Responsible Person: Department Team

•Completion Date: May 2025

## 5. Student Support and Resources:

•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

•Responsible Person: Course Instructor

•Completion Date: March 2025

### 6. Review and Update Learning Objectives:

•Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.

•Responsible Person: Curriculum Committee Team

•Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

•Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.

•Responsible Person: Program Lead

•Completion Date: Annually, with the next meeting scheduled for November 2024

# Summary

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

**RELATED ITEM LEVEL 1** 

# Develop an understanding of the Government Regulations and Standards Learning Objective Description:

Examining and recognizing various Government standards, regulations, and codes in Industrial settings. This will allow the Safety Professional to have a well-verified understanding of EPA, DOT, OSHA, NFPA, ANZI, ISO, and TCEQ regulations and standards.

**RELATED ITEM LEVEL 2** 

# Industrial Standards, Regulations, and Hazard Awareness Indicator Description:

All students enrolled in the Industrial Safety Management (ISM) minor are required to complete ETSM 3386 and demonstrate proficiency in safety management skills through writing-based assignments. Each semester, selected assignments from students in this course will be reviewed by faculty with expertise in safety management. Faculty members will score the assignments using a scale of 1 - 5, with 3 indicating "meets expectations," 4 "exceeds expectations," and 5 "far exceeds expectations."

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## **Assignments and Grading**

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(SO-2.3)	technical management.	technical management.	management skills.	technical management.	
Spreadsheet/Database	Limited ability in using	Basic use of spreadsheet and	Proficient use of spreadsheet	Advanced and innovative use of	
Use (SO-3.4)	spreadsheet and database tools.	database tools for tasks.	and database tools in	spreadsheet and database	
			complex scenarios.	applications.	

Technical Report Writing (SO-4.1)	Poorly structured and unclear	Basic report writing with some clarity issues.	Clear and coherent technical	Exceptional and persuasive technical report writing.
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RELATED ITEM LEVEL 3

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•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

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•Completion Date: May 2025

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•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

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•Completion Date: March 2025

## 6. Review and Update Learning Objectives:

- •Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.
- •Responsible Person: Curriculum Committee Team
- •Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

- •Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.
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## **Summary**

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

RELATED ITEM LEVEL 1

# **Understanding Hazardous Energy and its Forms Learning Objective Description:**

Understanding the different types of energy and the forms energy can take will allow the Safety professional to anticipate, recognize, evaluate, and control hazardous conditions that affect the worker, assets, and work environments.

**RELATED ITEM LEVEL 2** 

# Industrial Standards, Regulations, and Hazard Awareness Indicator Description:

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Technical Management	Struggles with concepts of	Basic understanding of	Competent in technical	Advanced and innovative in	
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Spreadsheet/Database Use (SO-3.4)	Limited ability in using spreadsheet and database tools.	Basic use of spreadsheet and database tools for tasks.	Proficient use of spreadsheet and database tools in complex scenarios.	Advanced and innovative use of spreadsheet and database applications.	
Technical Report Writing (SO-4.1)	Poorly structured and unclear reports.	Basic report writing with some clarity issues.	Clear and coherent technical reports.	Exceptional and persuasive technical report writing.	
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Team Participation (SO-5.2)	Limited participation in team situations.	Adequate participation and contribution in group projects.	Effective and collaborative participation in team situations.	Outstanding contribution and leadership in group projects.	
Ethical Problem Solving (SO-6.1)	Fails to recognize ethical issues.	Identifies ethical issues but struggles with solutions.	Effectively identifies and suggests solutions for ethical problems.	Exceptionally identifies and innovatively suggests solutions for complex ethical dilemmas.	

RELATED ITEM LEVEL 3

# Industrial hazards and associated safety standards Action Description:

## **Action Description:**

To improve the Industrial Safety Management minor based on analysis of assessment findings and/or KPI results, the following specific actions will be taken over the 2024-2025 academic year:

## 1. Enhancement of Curriculum Content:

•Action: Integrate additional modules focusing on emerging industrial hazards and associated safety standards, including the addition of the OSHA -10-hour course to enhance hazard awareness among students.

•Responsible Person: Lead Instructor

•Completion Date: June 2025

## 2. Faculty Development Workshops:

•Action: Conduct faculty development workshops to ensure instructors are up-to-date with the latest industrial safety standards and teaching methodologies.

•Responsible Person: Instructors

•Completion Date: Ongoing

## 3. <u>Implementation of Continuous Monitoring System:</u>

•Action: Establish a system to continuously monitor student performance and understanding of industrial hazards and safety standards through regular assessments and feedback mechanisms.

Responsible Person: Lead InstructorCompletion Date: December 2024

## 4. <u>Improvement of Assessment Methods:</u>

•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

•Responsible Person: Department Team

•Completion Date: May 2025

## 5. Student Support and Resources:

•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

•Responsible Person: Course Instructor

•Completion Date: March 2025

## 6. Review and Update Learning Objectives:

•Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.

•Responsible Person: Curriculum Committee Team

•Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

•Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.

•Responsible Person: Program Lead

•Completion Date: Annually, with the next meeting scheduled for November 2024

## **Summary**

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement

in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

RELATED ITEM LEVEL 1

# **Performance Objective**

# **Performance Objective Description:**

• At least 70 % of candidates will achieve a score of "Indicator Met" on Safety Management.

**RELATED ITEM LEVEL 2** 

### **KPI**

## **KPI Description:**

- Enhancement of knowledge about occupational safety and health, as well as their place in different workplaces.
- Utilization of educational tools proposed and implemented in the curriculum.

# **Target Description:**

70% of students enrolled in Industrial Safety courses should earn a grade of C or better

# **Results Description:**

## **Findings Summary:**

•This course, ETSM-2310 (Introduction to Occupational Safety), is newly introduced. As such, we are in the process of gathering data needed to evaluate and improve the course.

#### **Data Collection Process:**

- •We are currently collecting data on student performance and engagement with the course material.
- •The assessment includes tracking grades, participation in discussions, completion of assignments, and results of quizzes and exams.

## **Comparison to Existing Standards:**

- •As this is a new course, we do not have past trends or previous results to compare with. However, we are establishing a baseline for future comparisons.
- •Our current target aligns with standard academic performance expectations for similar courses within the program.

# **Conclusion:**

- •The criterion of 70% of students earning a grade of C or better has not yet been fully met but shows promising progress.
- •The findings indicate a need for continuous improvement in instructional methods and student support mechanisms.
- •We will continue to monitor and analyze the data, making necessary adjustments to ensure that future cohorts meet and exceed the performance objectives.

RELATED ITEM LEVEL 3

# **Action - KPI**

## **Action Description:**

## **Action Description:**

To improve the Introduction to Occupational Safety (ETSM-2310) course based on the analysis of initial findings and KPI results, the following specific steps will be taken for the 2024-2025 academic year:

## 1.Enhancement of Student Support Services

- •Action: Implement additional tutoring sessions and provide more personalized support for students struggling with course material.
- •Responsible Person/Group: Course Instructor
- •Completion Date: End of the Spring 2025 semester

## 2. Curricular Adjustments

- •Action: Review and update the course curriculum to include more interactive and practical components, such as hands-on assignments, case studies, and real-world scenarios.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Prior to the start of the Fall 2024 semester

# ${\bf 3. Improvement\ of\ Feedback\ Mechanisms}$

- •Action: Provide more detailed and timely feedback on assignments and assessments to help students understand areas for improvement and track their progress more effectively.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Ongoing throughout the 2024-2025 academic year

### 4.Increased Student Engagement

- •Action: Introduce additional discussion board activities and peer collaboration projects to enhance student engagement and participation.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Mid-semester review in Fall 2024 and adjustments ongoing

### **5.Professional Development for Instructors**

- •Action: Encourage and provide opportunities for instructors to attend workshops and training sessions focused on innovative teaching strategies and student support techniques.
- •Responsible Person/Group: Department Chair, Course Instructor
- •Completion Date: End of the Spring 2025 semester

### 6. Assessment of Technological Tools

- Action: Evaluate the effectiveness of the current technological tools used in the course (e.g., learning management system, presentation software) and explore potential enhancements or alternatives.
- •Responsible Person/Group: Course Instructor, IT Support Team
- •Completion Date: Prior to the start of the Fall 2024 semester

### **Monitoring and Evaluation:**

- •Action: Establish a process for continuous monitoring and evaluation of the implemented changes through regular surveys and feedback from students.
- Responsible Person/Group: Course Instructor, Department Assessment Coordinator
- •Completion Date: End of each semester in the 2024-2025 academic year

## **Rationale for Actions:**

These actions are designed to address the initial findings that indicate a need for improved student support, enhanced curriculum, and better feedback mechanisms. By implementing these steps, the goal is to increase the percentage of students achieving a grade of C or better, thereby meeting the KPI target and improving overall student learning outcomes.

## Why a Finding/Result Will Not Be Assessed in the Future:

- •Action: If any particular action does not lead to the desired improvement, it will be re-evaluated and either modified or replaced with a more effective strategy.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Continuous, with major reviews at the end of each academic year
- •These actions will ensure a systematic approach to monitoring, remediation, and enhancement of the course, ultimately leading to better student performance and satisfaction.

# Enhancement of Environmental, Health, and Safety Skills

# **Goal Description:**

By understanding EHS awareness and using available documentation and standards, safety professionals can enhance their skills in the general industry sector. This will allow the safety professional to comprehend what is needed of the safety professional on job tasks, risk assessments, JSA mitigation, Etc.

Providing Department: Industrial Safety Management Minor

RELATED ITEMS/ELEMENTS -

RELATED ITEM LEVEL 1

Develop an understanding of Ethical and Human Factors within the Industry Learning Objective Description:

To utilize techniques of Human factors and Human resources engineering technology in order to resolve ethical and social responsibilities in the Industrial sector. The Safety Professional will be able to resolve moral errors and enforce company policies by understanding Government regulations and Standards.

RELATED ITEM LEVEL 2

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			processes.		
Technical Management	Struggles with concepts of	Basic understanding of	Competent in technical	Advanced and innovative in	
(SO-2.3)	technical management.	technical management.	management skills.	technical management.	
Spreadsheet/Database	Limited ability in using	Basic use of spreadsheet and	Proficient use of spreadsheet	Advanced and innovative use of	
Use (SO-3.4)	spreadsheet and database tools.	database tools for tasks.	and database tools in	spreadsheet and database	
			complex scenarios.	applications.	
Technical Report Writing	Poorly structured and unclear	Basic report writing with	Clear and coherent technical	Exceptional and persuasive	
(SO-4.1)	reports.	some clarity issues.	reports.	technical report writing.	
Electronic Presentations	Ineffective electronic	Basic electronic	Engaging and informative	Advanced, creative, and impactful	
(SO-4.2)	presentations.	presentations with clear	electronic presentations.	electronic presentations.	
		content.			
Verbal Presentations	Difficulty in delivering clear	Adequate verbal presentation	Clear and effective verbal	Exceptional verbal presentation	
(SO-4.3)	verbal communication.	skills.	communication.	skills with persuasive delivery.	
Team Participation (SO-	Limited participation in team	Adequate participation and	Effective and collaborative	Outstanding contribution and	
5.2)	situations.	contribution in group	participation in team	leadership in group projects.	
		projects.	situations.		
Ethical Problem Solving	Fails to recognize ethical	Identifies ethical issues but	Effectively identifies and	Exceptionally identifies and	
(SO-6.1)	issues.	struggles with solutions.	suggests solutions for ethical	innovatively suggests solutions for	
			problems.	complex ethical dilemmas.	

#### **RELATED ITEM LEVEL 3**

# Industrial hazards and associated safety standards Action Description:

## **Action Description:**

To improve the Industrial Safety Management minor based on analysis of assessment findings and/or KPI results, the following specific actions will be taken over the 2024-2025 academic year:

## 1. Enhancement of Curriculum Content:

•Action: Integrate additional modules focusing on emerging industrial hazards and associated safety standards, including the addition of the OSHA -10-hour course to enhance hazard awareness among students.

•Responsible Person: Lead Instructor

•Completion Date: June 2025

## 2. Faculty Development Workshops:

•Action: Conduct faculty development workshops to ensure instructors are up-to-date with the latest industrial safety standards and teaching methodologies.

Responsible Person: InstructorsCompletion Date: Ongoing

## 3. Implementation of Continuous Monitoring System:

•Action: Establish a system to continuously monitor student performance and understanding of industrial hazards and safety standards through regular assessments and feedback mechanisms.

•Responsible Person: Lead Instructor•Completion Date: December 2024

## 4. <u>Improvement of Assessment Methods:</u>

•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

•Responsible Person: Department Team

•Completion Date: May 2025

## 5. Student Support and Resources:

•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

•Responsible Person: Course Instructor

•Completion Date: March 2025

### 6. Review and Update Learning Objectives:

•Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.

•Responsible Person: Curriculum Committee Team

•Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

•Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.

•Responsible Person: Program Lead

•Completion Date: Annually, with the next meeting scheduled for November 2024

### **Summary**

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

RELATED ITEM LEVEL 1

# Develop an understanding of the Government Regulations and Standards Learning Objective Description:

Examining and recognizing various Government standards, regulations, and codes in Industrial settings. This will allow the Safety Professional to have a well-verified understanding of EPA, DOT, OSHA, NFPA, ANZI, ISO, and TCEQ regulations and standards.

**RELATED ITEM LEVEL 2** 

# Industrial Standards, Regulations, and Hazard Awareness Indicator Description:

All students enrolled in the Industrial Safety Management (ISM) minor are required to complete ETSM 3386 and demonstrate proficiency in safety management skills through writing-based assignments. Each semester, selected assignments from students in this course will be reviewed by faculty with expertise in safety management. Faculty members will score the assignments using a scale of 1 - 5, with 3 indicating "meets expectations," 4 "exceeds expectations," and 5 "far exceeds expectations."

# **Criterion Description:**

The goal is for at least 70% of the students enrolled in ETSM 3386 to achieve a score of 3.5 (meets standards) or higher.

## **Assignments and Grading**

**Assignments:** The course includes discussion boards, writing assignments, quizzes, a midterm exam, and a final exam. These assignments are designed to evaluate students' understanding and application of safety management principles. **Final Grading:** Letter grades are based on the distribution of points earned throughout the course:

•**A:** 90 – 100%

•**B**: 80 - 89.9%

**•C:** 70 − 79.9%

•**D**: 60 - 69.9%

## **Activity Points and Weight:**

Discussion Board: 11 activities, 1100 points, 5%
Writing Assignments: 10 activities, 1000 points, 25%

•Quizzes: 4 activities, 400 points, 20%
•Midterm Exam: 1 exam, 100 points, 25%
•Final Exam: 1 exam, 100 points, 25%

•**Total:** 2700 points, 100%

# **Findings Description:**

#### **Future Goal:**

We will continuously improve our data collection and analysis processes using Blackboard to ensure that at least 70% of students achieve a score of 3.5 (meets standards) or higher on their writing-based assignments.

## **Supporting Documents:**

- •Planned Summary of Exam Results: To be collected and anonymized using Blackboard
- •Planned Practicum Evaluation Summaries: To be collected and anonymized using Blackboard
- •Planned Year-over-Year Comparison Reports: To be compiled from Blackboard data
- •Planned Internal Audit Reports and Compliance Checklists: To be sourced from syllabus or course materials

# ETSM 3386 Assessment Rubric

ETSM 3386 Assessment R	ubric				_
Criteria	Unsatisfactory (1)	Developing (2)	Satisfactory (3)	Exemplary (4)	Score
					(1-5)
Knowledge of Science	Does not recall or incorrectly	Repeats aspects of science	Repeats aspects of science	Identifies applicable science and	
(SO-1.2)	applies principles of chemistry	demonstrated in instruction	demonstrated in instruction	manipulates or combines it to	
	or physics.	with frequent errors.	with few errors.	achieve a solution with almost no	
				errors.	
Knowledge of Business	Does not recall or incorrectly	Repeats business concepts	Repeats business concepts	Employs business as a tool in	
(SO-1.3)	applies principles of	demonstrated in instruction	demonstrated in instruction	problem solving with almost no	
	management and business.	with frequent errors.	with few errors.	errors.	
Technical Processes	Difficulty in understanding	Basic understanding of	Competent in understanding	Advanced and innovative	
(SO-2.2)	technical processes.	technical processes.	and applying technical	application of technical processes.	
			processes.		
Technical Management	Struggles with concepts of	Basic understanding of	Competent in technical	Advanced and innovative in	
(SO-2.3)	technical management.	technical management.	management skills.	technical management.	
Spreadsheet/Database	Limited ability in using	Basic use of spreadsheet and	Proficient use of spreadsheet	Advanced and innovative use of	
Use (SO-3.4)	spreadsheet and database tools.	database tools for tasks.	and database tools in	spreadsheet and database	
			complex scenarios.	applications.	
Technical Report Writing	Poorly structured and unclear	Basic report writing with	Clear and coherent technical	Exceptional and persuasive	
(SO-4.1)	reports.	some clarity issues.	reports.	technical report writing.	
Electronic Presentations	Ineffective electronic	Basic electronic	Engaging and informative	Advanced, creative, and impactful	
(SO-4.2)	presentations.	presentations with clear	electronic presentations.	electronic presentations.	
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Verbal Presentations	Difficulty in delivering clear	Adequate verbal presentation	Clear and effective verbal	Exceptional verbal presentation	
(SO-4.3)	verbal communication.	skills.	communication.	skills with persuasive delivery.	
Team Participation (SO-	Limited participation in team	Adequate participation and	Effective and collaborative	Outstanding contribution and	
5.2)	situations.	contribution in group	participation in team	leadership in group projects.	
		projects.	situations.		
Ethical Problem Solving	Fails to recognize ethical	Identifies ethical issues but	Effectively identifies and	Exceptionally identifies and	
(SO-6.1)	issues.	struggles with solutions.	suggests solutions for ethical	innovatively suggests solutions for	
			problems.	complex ethical dilemmas.	

# Industrial hazards and associated safety standards Action Description:

## **Action Description:**

To improve the Industrial Safety Management minor based on analysis of assessment findings and/or KPI results, the following specific actions will be taken over the 2024-2025 academic year:

### 1. Enhancement of Curriculum Content:

•Action: Integrate additional modules focusing on emerging industrial hazards and associated safety standards, including the addition of the OSHA -10-hour course to enhance hazard awareness among students.

•Responsible Person: Lead Instructor

•Completion Date: June 2025

## 2. Faculty Development Workshops:

•Action: Conduct faculty development workshops to ensure instructors are up-to-date with the latest industrial safety standards and teaching methodologies.

•Responsible Person: Instructors

•Completion Date: Ongoing

## 3. Implementation of Continuous Monitoring System:

•Action: Establish a system to continuously monitor student performance and understanding of industrial hazards and safety standards through regular assessments and feedback mechanisms.

Responsible Person: Lead InstructorCompletion Date: December 2024

## 4. Improvement of Assessment Methods:

•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

•Responsible Person: Department Team

•Completion Date: May 2025

## 5. Student Support and Resources:

•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

•Responsible Person: Course Instructor

•Completion Date: March 2025

## 6. Review and Update Learning Objectives:

•Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.

•Responsible Person: Curriculum Committee Team

•Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

•Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.

•Responsible Person: Program Lead

## **Summary**

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

RELATED ITEM LEVEL 1

# **Understanding Hazardous Energy and its Forms**

# **Learning Objective Description:**

Understanding the different types of energy and the forms energy can take will allow the Safety professional to anticipate, recognize, evaluate, and control hazardous conditions that affect the worker, assets, and work environments.

**RELATED ITEM LEVEL 2** 

# Industrial Standards, Regulations, and Hazard Awareness Indicator Description:

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# **Criterion Description:**

The goal is for at least 70% of the students enrolled in ETSM 3386 to achieve a score of 3.5 (meets standards) or higher.

## **Assignments and Grading**

**Assignments:** The course includes discussion boards, writing assignments, quizzes, a midterm exam, and a final exam. These assignments are designed to evaluate students' understanding and application of safety management principles.

<u>Final Grading</u>: Letter grades are based on the distribution of points earned throughout the course:

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## **Findings Description:**

## **Future Goal:**

We will continuously improve our data collection and analysis processes using Blackboard to ensure that at least 70% of students achieve a score of 3.5 (meets standards) or higher on their writing-based assignments.

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Use (SO-3.4)	spreadsheet and database tools.	database tools for tasks.	and database tools in	spreadsheet and database	
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(SO-6.1)	issues.	struggles with solutions.	suggests solutions for ethical	innovatively suggests solutions for	
			problems.	complex ethical dilemmas.	

RELATED ITEM LEVEL 3

# Industrial hazards and associated safety standards Action Description:

## **Action Description:**

To improve the Industrial Safety Management minor based on analysis of assessment findings and/or KPI results, the following specific actions will be taken over the 2024-2025 academic year:

## 1. Enhancement of Curriculum Content:

•Action: Integrate additional modules focusing on emerging industrial hazards and associated safety standards, including the addition of the OSHA -10-hour course to enhance hazard awareness among students.

•Responsible Person: Lead Instructor

•Completion Date: June 2025

## 2. Faculty Development Workshops:

•Action: Conduct faculty development workshops to ensure instructors are up-to-date with the latest industrial safety standards and teaching methodologies.

Responsible Person: InstructorsCompletion Date: Ongoing

## 3. Implementation of Continuous Monitoring System:

•Action: Establish a system to continuously monitor student performance and understanding of industrial hazards and safety standards through regular assessments and feedback mechanisms.

Responsible Person: Lead InstructorCompletion Date: December 2024

## 4. Improvement of Assessment Methods:

•Action: Revise assessment methods to include more practical, real-world scenario-based evaluations to better gauge student competency in handling industrial hazards.

•Responsible Person: Department Team

•Completion Date: May 2025

### 5. Student Support and Resources:

•Action: Develop and provide additional resources, such as case studies and access to industry safety databases, to support student learning.

•Responsible Person: Course Instructor

•Completion Date: March 2025

### 6. Review and Update Learning Objectives:

- •Action: Regularly review and update the learning objectives to ensure they align with current industry standards and practices.
- •Responsible Person: Curriculum Committee Team
- •Completion Date: Ongoing, with the next review in July 2025

## 7. Annual Review with the Industrial Advisory Board:

- •Action: Meet with the Industrial Advisory Board each year to review program areas, gather feedback, and identify further areas for improvement.
- •Responsible Person: Program Lead
- •Completion Date: Annually, with the next meeting scheduled for November 2024

## Summary

These actions are designed to enhance the Industrial Safety Management minor by addressing key areas identified through assessment findings. Each action includes specific steps, responsible persons or groups, and extended completion dates to ensure a manageable timeline. The focus is on continuous improvement in curriculum content, including adding the OSHA 10-hour course, teaching methodologies, assessment methods, student support, and regular feedback from the Industrial Advisory Board to better prepare students for handling industrial hazards and adhering to safety standards.

RELATED ITEM LEVEL 1

# **Performance Objective**

# **Performance Objective Description:**

• At least 70 % of candidates will achieve a score of "Indicator Met" on Safety Management.

RELATED ITEM LEVEL 2

## **KPI**

# **KPI Description:**

- Enhancement of knowledge about occupational safety and health, as well as their place in different workplaces.
- Utilization of educational tools proposed and implemented in the curriculum.

# **Target Description:**

# 70% of students enrolled in Industrial Safety courses should earn a grade of C or better

# **Results Description:**

### **Findings Summary:**

•This course, ETSM-2310 (Introduction to Occupational Safety), is newly introduced. As such, we are in the process of gathering data needed to evaluate and improve the course.

### **Data Collection Process:**

- •We are currently collecting data on student performance and engagement with the course material.
- •The assessment includes tracking grades, participation in discussions, completion of assignments, and results of quizzes and exams.

## **Comparison to Existing Standards:**

- •As this is a new course, we do not have past trends or previous results to compare with. However, we are establishing a baseline for future comparisons.
- •Our current target aligns with standard academic performance expectations for similar courses within the program.

### **Conclusion:**

- •The criterion of 70% of students earning a grade of C or better has not yet been fully met but shows promising progress.
- •The findings indicate a need for continuous improvement in instructional methods and student support mechanisms.
- •We will continue to monitor and analyze the data, making necessary adjustments to ensure that future cohorts meet and exceed the performance objectives.

RELATED ITEM LEVEL 3

### **Action - KPI**

# **Action Description:**

## **Action Description:**

To improve the Introduction to Occupational Safety (ETSM-2310) course based on the analysis of initial findings and KPI results, the following specific steps will be taken for the 2024-2025 academic year:

## 1. Enhancement of Student Support Services

- •Action: Implement additional tutoring sessions and provide more personalized support for students struggling with course material.
- •Responsible Person/Group: Course Instructor
- •Completion Date: End of the Spring 2025 semester

## 2. Curricular Adjustments

- •Action: Review and update the course curriculum to include more interactive and practical components, such as hands-on assignments, case studies, and real-world scenarios.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Prior to the start of the Fall 2024 semester

## 3.Improvement of Feedback Mechanisms

- •Action: Provide more detailed and timely feedback on assignments and assessments to help students understand areas for improvement and track their progress more effectively.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Ongoing throughout the 2024-2025 academic year

## 4.Increased Student Engagement

- •Action: Introduce additional discussion board activities and peer collaboration projects to enhance student engagement and participation.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Mid-semester review in Fall 2024 and adjustments ongoing

## **5.Professional Development for Instructors**

- •Action: Encourage and provide opportunities for instructors to attend workshops and training sessions focused on innovative teaching strategies and student support techniques.
- •Responsible Person/Group: Department Chair, Course Instructor
- •Completion Date: End of the Spring 2025 semester

## 6. Assessment of Technological Tools

- Action: Evaluate the effectiveness of the current technological tools used in the course (e.g., learning management system, presentation software) and explore potential enhancements or alternatives.
- •Responsible Person/Group: Course Instructor, IT Support Team
- •Completion Date: Prior to the start of the Fall 2024 semester

## **Monitoring and Evaluation:**

- •Action: Establish a process for continuous monitoring and evaluation of the implemented changes through regular surveys and feedback from students.
- •Responsible Person/Group: Course Instructor, Department Assessment Coordinator
- •Completion Date: End of each semester in the 2024-2025 academic year

## **Rationale for Actions:**

These actions are designed to address the initial findings that indicate a need for improved student support, enhanced curriculum, and better feedback mechanisms. By implementing these steps, the goal is to increase the percentage of students achieving a grade of C or better, thereby meeting the KPI target and improving overall student learning outcomes.

## Why a Finding/Result Will Not Be Assessed in the Future:

- •Action: If any particular action does not lead to the desired improvement, it will be re-evaluated and either modified or replaced with a more effective strategy.
- •Responsible Person/Group: Course Instructor
- •Completion Date: Continuous, with major reviews at the end of each academic year
- •These actions will ensure a systematic approach to monitoring, remediation, and enhancement of the course, ultimately leading to better student performance and satisfaction.

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

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

## **Closing Summary**

In the next cycle of continuous improvement, we have developed a comprehensive plan that encompasses all identified actions from the current plan and introduces new initiatives to further enhance our program. The new Plan for Continuous Improvement (PCI) outlines specific actions, implementation details, responsible parties, and target completion dates. The following narrative provides an overview of the plan:

# Action 1:

Curriculum Enhancement We will further enhance the curriculum to ensure alignment with industry standards, emerging trends, and regulatory requirements. This includes updating course materials, integrating case studies, and incorporating real-world scenarios. The responsible party for this action is the Curriculum Development Committee, and the target completion date is ongoing.

## Action 2:

Industry Partnerships and Collaboration We will foster stronger partnerships and collaboration with industry organizations and professionals to enrich students' learning experiences and promote industry relevance. This will involve guest lectures, industry site visits, and internship opportunities. The Industry Engagement and Partnership Office, in collaboration with faculty members, will be responsible for this action.

# Action 3:

Assessment and Evaluation We will establish a robust assessment and evaluation system to measure student learning outcomes, program effectiveness, and industry relevance. This includes the implementation of formative and summative assessments, student feedback mechanisms, and program evaluation surveys. The

Assessment and Evaluation Committee will oversee this action, with target completion dates for specific assessment cycles.

## Action 4:

Faculty Professional Development We will provide ongoing professional development opportunities for faculty members to enhance their knowledge and instructional practices. This includes workshops, conferences, and specialized training programs focused on industry advancements, pedagogy, and safety practices. The Professional Development Committee will be responsible for organizing these activities, with target completion dates for each professional development opportunity.

## Action 5:

Integration of Emerging Technologies We will integrate emerging technologies into the curriculum to enhance student engagement and prepare them for the evolving demands of the industry. This includes the incorporation of virtual reality simulations, online learning platforms, and data analysis tools. The curriculum development team, in collaboration with technology specialists, will be responsible for this action, with target completion dates for the integration of specific technologies.

These actions form our new Plan for Continuous Improvement (PCI) and will drive our efforts to enhance the program. By implementing these actions, we aim to continually improve student learning outcomes, industry relevance, and program effectiveness.

# **Update of Progress to the Previous Cycle's PCI:**

### **Progress Update:**

#### **Action 1: Curriculum Enhancement**

• **Progress**: The ongoing nature of this action means continuous adjustments are being made to align with industry standards and emerging trends.

## **Action 2: Industry Partnerships and Collaboration**

•Progress: We have had new Industrial Advisory members join and will continue communicating with Industry to provide guest lectures in the class.

## **Action 3: Assessment and Evaluation**

•Progress: A new assessment system, including formative and summative assessments, was implemented. Student feedback mechanisms were implemented, and the first cycle of program evaluation surveys was completed, providing valuable insights into program effectiveness.

# **Action 4: Faculty Professional Development**

•**Progress**: Some faculty have become OSHA Authorized Trainers and NCCER instructors and will begin offering training to students in 24-25 years.

## **Action 5: Integration of Emerging Technologies**

•Progress: Virtual reality simulations are still being researched. The OSHA e-tool is being used to identify hazards in the workplace for online learning.

# **New Plan for Continuous Improvement Item**

# **Closing Summary:**

## **New Plan for Continuous Improvement (PCI):**

**Summary:** The new PCI builds on the progress made in the previous cycle, incorporating new initiatives to further enhance our program's effectiveness and relevance. The following actions will be implemented in the next cycle:

## **Action 1: Curriculum Enhancement**

- •Description: Continue to update and refine the curriculum to reflect the latest industry standards and regulatory requirements. Integrate advanced case studies and more comprehensive real-world scenarios.
- •Implementation: Ongoing updates by the Curriculum Development Committee.
- •Responsible Party: Course Instructor

•Target Completion Date: Ongoing throughout the 2024-2025 academic year.

## **Action 2: Industry Partnerships and Collaboration**

- •Description: Strengthen existing partnerships and establish new collaborations with industry leaders. Expand the range of guest lectures, industry site visits, and internship opportunities.
- •Implementation: Develop a schedule for regular engagement activities.
- •Responsible Party: Faculty Members
- Target Completion Date: End of Spring 2025.

### **Action 3: Assessment and Evaluation**

- •Description: Enhance the assessment system by incorporating more comprehensive evaluation tools and expanding the use of student feedback mechanisms.
- •Implementation: Regular assessments and surveys conducted each semester.
- •Responsible Party: Assessment and Evaluation Committee
- •Target Completion Dates: Each semester in the 2024-2025 academic year.

## **Action 4: Faculty Professional Development**

- •**Description**: Provide targeted professional development opportunities focusing on emerging industry trends, advanced pedagogical techniques, and new safety practices.
- •Implementation: Organize and schedule professional development activities.
- •Responsible Party: Chair of Department, Faculty
- Target Completion Date: Various dates throughout the 2024-2025 academic year.

### **Action 5: Integration of Emerging Technologies**

- •Description: Expand the use of emerging technologies within the curriculum to further enhance student engagement and learning outcomes. Introduce new tools such as augmented reality and advanced data visualization software.
- •Implementation: Collaboration between the curriculum development team and technology specialists.
- •Responsible Party: Faculty, Course Instructor
- •Target Completion Dates: Specific technologies integrated by the end of each semester in the 2024-2025 academic year.

## **Action 6: Student Support and Engagement**

- •Description: Develop additional resources and support systems for students, including expanded tutoring services and peer mentoring programs.
- •Implementation: Establish and promote new support initiatives.
- •Responsible Party: Student Services Office, Course Instructor
- Target Completion Date: End of Fall 2024 semester.

These actions will ensure that we continue to improve our program, enhance student learning outcomes, and maintain strong industry relevance. By implementing this comprehensive Plan for Continuous Improvement, we are committed to fostering an environment of excellence and innovation in occupational safety education.