

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. Up-to-date tools and procedures are referenced to properly perform various job functions and meet all governmental regulations.

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:

The Engineering Technology-Safety Management program's emphasis is to provide students with knowledge on various topics that address Federal, State, and local government regulations, standards, and policies. As a result, the students will be proficient in identifying and mitigating hazards, acting as a competent person, and making recommendations to eliminate or substitute them, or provide engineering controls and, at the same time, being able to revise and create new administrative rules and make recommendations on personal protective equipment for various prospective job functions

Criterion Description:

The curriculum is designed to develop students' knowledge of the Environmental, Health, and Safety in General Industry, Construction, Department of Transportation (DOT), Environmental Protection Agency (EPA) / Texas Commission on Environmental Quality (TCEQ), Federal Emergency Management Agency (FEMA), and Occupational Safety and Health Administration (OSHA). Students will be able to develop appropriate prevention plans (Energy Isolation Plan, Emergency & Evacuation Plan, Health & Safety Plan) and methods to enhance workplace safety and reduce injuries.

Findings Description:

1. General Industry: Although specific data is not available at present, faculty members and staff have consistently observed that the curriculum effectively covers key concepts and regulations related to Environmental, Health, and Safety in the general industry. To enhance data collection, we will implement student surveys and assessments, ensuring systematic data gathering on student performance and learning outcomes in this area.
2. Construction: While quantitative data is not currently accessible, anecdotal evidence suggests that the curriculum adequately addresses Environmental, Health, and Safety considerations specific to the construction industry. To augment our assessment efforts, we will establish a process for collecting course evaluations and soliciting feedback from students and industry professionals, enabling us to measure their perception of learning outcomes and identify areas for improvement.
3. Department of Transportation (DOT): Due to limited available data, we plan to implement targeted assessments to evaluate student knowledge and application of DOT regulations and safety requirements. Through the introduction of case studies and practical exercises, we aim to gather comprehensive data on students' competency in this area and make informed improvements accordingly.
4. Environmental Protection Agency (EPA)/Texas Commission on Environmental Quality (TCEQ): While specific assessment data is not currently accessible, we recognize the need to gather data on students' understanding of environmental regulations and their ability to apply control measures.

Moving forward, we will develop assessment tools such as rubrics and surveys to evaluate student performance and gather evidence of learning outcomes in relation to EPA/TCEQ guidelines.

5. Federal Emergency Management Agency (FEMA): Although quantitative data is not available, we will implement qualitative assessments such as interviews and focus groups to gather insights from students, alumni, and industry professionals regarding their perceptions of the curriculum's effectiveness in emergency and disaster management. This qualitative feedback will contribute to our ongoing efforts to improve the curriculum.
6. Occupational Safety and Health Administration (OSHA): While specific data is currently limited, faculty members and staff have consistently observed that the curriculum effectively covers OSHA regulations, safety standards, and best practices. We will implement various assessment methods, such as practical demonstrations and problem-solving activities, to gather evidence of students' application of OSHA guidelines and continuously enhance their learning experiences.

As part of our commitment to continuous improvement, we have outlined a plan for future data collection and assessment. By implementing targeted surveys, assessments, interviews, and focus groups, we aim to gather comprehensive and reliable data on student performance and perceptions of the curriculum's effectiveness in the required knowledge areas. This data will inform our ongoing efforts to enhance workplace safety, reduce injuries, and align the curriculum with industry standards and best practices.

RELATED ITEM LEVEL 3

Industrial hazards and associated safety standards

Action Description:

Given the ongoing assessment and the absence of specific assessment findings at this time, we have outlined the following proactive actions to improve the curriculum's alignment with industrial hazards and associated safety standards. These actions are based on our analysis of industry trends, best practices, and pedagogical considerations.

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2. Collaboration with Industry Experts: Foster collaborations and partnerships with industry experts, professionals, and organizations to ensure the curriculum remains up-to-date with industry standards and best practices. Engage industry experts as guest lecturers, invite them to participate in curriculum development workshops, and seek their input on emerging industrial hazards. The responsible person/group for this action will be the Industry Engagement and Partnership Office, in collaboration with faculty members. Completion date: Ongoing, with regular industry collaborations.
3. Active Learning Strategies: Incorporate active learning strategies into the curriculum to enhance students' engagement with industrial hazards and associated safety standards. This may involve integrating hands-on laboratory exercises, simulation activities, and problem-solving projects that simulate real-world safety challenges. The responsible person/group for this action will be the curriculum development team in collaboration with faculty members. Completion date: Ongoing, with continuous integration of active learning strategies.
4. Faculty Professional Development: Provide faculty members with opportunities for professional development focused on industrial hazards, safety standards, and pedagogical approaches. This may include attending relevant workshops, conferences, and specialized training sessions to enhance their knowledge and instructional practices. The responsible

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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

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RELATED ITEM LEVEL 3

Industrial hazards and associated safety standards

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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

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RELATED ITEM LEVEL 3

Industrial hazards and associated safety standards

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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:

To assess the enhancement of knowledge about occupational safety and health, as well as their place in different workplaces, we plan to implement assessments that measure students' understanding of key concepts and their ability to apply them in real-world scenarios. By analyzing the assessment results, we will gain insights into the effectiveness of the curriculum in developing students' knowledge in occupational safety and health.

Regarding the utilization of educational tools proposed and implemented in the curriculum, we will collect data on students' engagement with these tools, such as textbooks, online resources, and interactive learning materials. Student feedback and assessments will provide valuable insights into the effectiveness and impact of these tools on their learning experiences.

RELATED ITEM LEVEL 3

KPI

Action Description:

Given the absence of specific assessment findings at this time, we will outline proactive actions to improve the program based on the analysis of the KPI results in the future. These actions will focus on monitoring, remediation, or enhancement of specific areas to ensure continuous improvement of the program.

1. **Monitoring and Analysis:** Establish a systematic process for monitoring and analyzing the KPI results related to the program. This will involve collecting data on key performance indicators, such as student performance, program outcomes, and feedback from stakeholders. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular monitoring and analysis.
2. **Identification of Improvement Areas:** Based on the analysis of the KPI results, identify specific areas that require remediation or enhancement. This may include areas where performance falls below the target, where student learning outcomes need improvement, or where curriculum adjustments are necessary to align with industry standards. The responsible person/group for this action will be the Program Leadership Team in collaboration with faculty members.
3. **Development and Implementation of Improvement Strategies:** Define logical next steps to address the identified improvement areas. This may involve developing action plans, implementing pedagogical changes, revising curriculum content, or enhancing instructional methods to better support student learning and program outcomes. The responsible person/group for this action will be the Program Leadership Team in collaboration with faculty members.
4. **Continuous Program Evaluation:** Establish a cyclical process for ongoing program evaluation to ensure that the implemented improvement strategies are effective and impactful. Regularly assess the outcomes of the improvement efforts, collect feedback from stakeholders, and make necessary adjustments based on the evaluation findings. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular program evaluations.

These actions reflect our commitment to continuous improvement and the enhancement of the program based on the analysis of the KPI results. Through the implementation of these actions, we aim to ensure that the program evolves and adapts to meet the needs of students and stakeholders, while maintaining a focus on achieving the desired outcomes.

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.

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2. **Collaboration with Industry Experts:** Foster collaborations and partnerships with industry experts, professionals, and organizations to ensure the curriculum remains up-to-date with industry standards and best practices. Engage industry experts as guest lecturers, invite them to participate in curriculum development workshops, and seek their input on emerging industrial hazards. The responsible person/group for this action will be the Industry Engagement and Partnership Office, in collaboration with faculty members. Completion date: Ongoing, with regular industry collaborations.
3. **Active Learning Strategies:** Incorporate active learning strategies into the curriculum to enhance students' engagement with industrial hazards and associated safety standards. This may involve integrating hands-on laboratory exercises, simulation activities, and problem-solving projects that simulate real-world safety challenges. The responsible person/group for this action will be the curriculum development team in collaboration with faculty members. Completion date: Ongoing, with continuous integration of active learning strategies.
4. **Faculty Professional Development:** Provide faculty members with opportunities for professional development focused on industrial hazards, safety standards, and pedagogical approaches. This may include attending relevant workshops, conferences, and specialized training sessions to enhance their knowledge and instructional practices. The responsible person/group for this action will be the Professional Development Committee within the Engineering Technology-Safety Management program. Completion date: Ongoing, with regular professional development opportunities.
5. **Ongoing Assessment and Feedback:** Establish a systematic process for ongoing assessment and feedback to evaluate students' understanding of industrial hazards and associated safety standards. This includes implementing formative and summative assessments, collecting student feedback, and analyzing assessment results to identify areas for improvement. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular assessment cycles.

These actions reflect our commitment to continuous improvement and the enhancement of the curriculum's alignment with industrial hazards and associated safety standards. By implementing these actions, we aim to ensure that our students receive a comprehensive education that prepares them to address real-world safety challenges effectively.

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:

The Engineering Technology-Safety Management program's emphasis is to provide students with knowledge on various topics that address Federal, State, and local government regulations, standards, and policies. As a result, the students will be proficient in identifying and mitigating hazards, acting as a competent person, and making recommendations to eliminate or substitute them, or provide engineering controls and, at the same time, being able to revise and create new administrative rules and make recommendations on personal protective equipment for various prospective job functions

Criterion Description:

The curriculum is designed to develop students' knowledge of the Environmental, Health, and Safety in General Industry, Construction, Department of Transportation (DOT), Environmental Protection Agency (EPA) / Texas Commission on Environmental Quality (TCEQ), Federal Emergency Management Agency (FEMA), and Occupational Safety and Health Administration (OSHA). Students will be able to develop appropriate prevention plans (Energy Isolation Plan, Emergency & Evacuation Plan, Health & Safety Plan) and methods to enhance workplace safety and reduce injuries.

Findings Description:

1. General Industry: Although specific data is not available at present, faculty members and staff have consistently observed that the curriculum effectively covers key concepts and regulations related to Environmental, Health, and Safety in the general industry. To enhance data collection, we will implement student surveys and assessments, ensuring systematic data gathering on student performance and learning outcomes in this area.
2. Construction: While quantitative data is not currently accessible, anecdotal evidence suggests that the curriculum adequately addresses Environmental, Health, and Safety considerations specific to the construction industry. To augment our assessment efforts, we will establish a process for collecting course evaluations and soliciting feedback from students and industry professionals, enabling us to measure their perception of learning outcomes and identify areas for improvement.
3. Department of Transportation (DOT): Due to limited available data, we plan to implement targeted assessments to evaluate student knowledge and application of DOT regulations and safety requirements. Through the introduction of case studies and practical exercises, we aim to gather comprehensive data on students' competency in this area and make informed improvements accordingly.
4. Environmental Protection Agency (EPA)/Texas Commission on Environmental Quality (TCEQ): While specific assessment data is not currently accessible, we recognize the need to gather data on students' understanding of environmental regulations and their ability to apply control measures. Moving forward, we will develop assessment tools such as rubrics and surveys to evaluate student performance and gather evidence of learning outcomes in relation to EPA/TCEQ guidelines.
5. Federal Emergency Management Agency (FEMA): Although quantitative data is not available, we will implement qualitative assessments such as interviews and focus groups to gather insights from students, alumni, and industry professionals regarding their perceptions of the curriculum's effectiveness in emergency and disaster management. This qualitative feedback will contribute to our ongoing efforts to improve the curriculum.
6. Occupational Safety and Health Administration (OSHA): While specific data is currently limited, faculty members and staff have consistently observed that the curriculum effectively covers OSHA regulations, safety standards, and best practices. We will implement various assessment methods, such as practical demonstrations and problem-solving activities, to gather evidence of students' application of OSHA guidelines and continuously enhance their learning experiences.

As part of our commitment to continuous improvement, we have outlined a plan for future data collection and assessment. By implementing targeted surveys, assessments, interviews, and focus groups, we aim to gather comprehensive and reliable data on student performance and perceptions of the curriculum's effectiveness in the required knowledge areas. This data will inform our ongoing efforts to enhance workplace safety, reduce injuries, and align the curriculum with industry standards and best practices.

RELATED ITEM LEVEL 3

Industrial hazards and associated safety standards

Action Description:

Given the ongoing assessment and the absence of specific assessment findings at this time, we have outlined the following proactive actions to improve the curriculum's alignment with industrial hazards and associated safety standards. These actions are based on our analysis of industry trends, best practices, and pedagogical considerations.

1. **Curriculum Enhancement:** Continuously review and enhance the curriculum to ensure alignment with industrial hazards and associated safety standards. This includes updating course materials, integrating case studies and real-world scenarios, and incorporating emerging trends in the field. The responsible person/group for this action will be the curriculum review committee, comprised of faculty members from the Engineering Technology-Safety Management program. Completion date: Ongoing, with regular curriculum reviews and updates.
2. **Collaboration with Industry Experts:** Foster collaborations and partnerships with industry experts, professionals, and organizations to ensure the curriculum remains up-to-date with industry standards and best practices. Engage industry experts as guest lecturers, invite them to participate in curriculum development workshops, and seek their input on emerging industrial hazards. The responsible person/group for this action will be the Industry Engagement and Partnership Office, in collaboration with faculty members. Completion date: Ongoing, with regular industry collaborations.
3. **Active Learning Strategies:** Incorporate active learning strategies into the curriculum to enhance students' engagement with industrial hazards and associated safety standards. This may involve integrating hands-on laboratory exercises, simulation activities, and problem-solving projects that simulate real-world safety challenges. The responsible person/group for this action will be the curriculum development team in collaboration with faculty members. Completion date: Ongoing, with continuous integration of active learning strategies.
4. **Faculty Professional Development:** Provide faculty members with opportunities for professional development focused on industrial hazards, safety standards, and pedagogical approaches. This may include attending relevant workshops, conferences, and specialized training sessions to enhance their knowledge and instructional practices. The responsible person/group for this action will be the Professional Development Committee within the Engineering Technology-Safety Management program. Completion date: Ongoing, with regular professional development opportunities.
5. **Ongoing Assessment and Feedback:** Establish a systematic process for ongoing assessment and feedback to evaluate students' understanding of industrial hazards and associated safety standards. This includes implementing formative and summative assessments, collecting student feedback, and analyzing assessment results to identify areas for improvement. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular assessment cycles.

These actions reflect our commitment to continuous improvement and the enhancement of the curriculum's alignment with industrial hazards and associated safety standards. By implementing these actions, we aim to ensure that our students receive a comprehensive education that prepares them to address real-world safety challenges effectively.

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:

To assess the enhancement of knowledge about occupational safety and health, as well as their place in different workplaces, we plan to implement assessments that measure students' understanding of key concepts and their ability to apply them in real-world scenarios. By analyzing the assessment results, we will gain insights into the effectiveness of the curriculum in developing students' knowledge in occupational safety and health.

Regarding the utilization of educational tools proposed and implemented in the curriculum, we will collect data on students' engagement with these tools, such as textbooks, online resources, and interactive learning materials. Student feedback and assessments will provide valuable insights into the effectiveness and impact of these tools on their learning experiences.

RELATED ITEM LEVEL 3

KPI

Action Description:

Given the absence of specific assessment findings at this time, we will outline proactive actions to improve the program based on the analysis of the KPI results in the future. These actions will focus on monitoring, remediation, or enhancement of specific areas to ensure continuous improvement of the program.

1. **Monitoring and Analysis:** Establish a systematic process for monitoring and analyzing the KPI results related to the program. This will involve collecting data on key performance indicators, such as student performance, program outcomes, and feedback from stakeholders. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular monitoring and analysis.
2. **Identification of Improvement Areas:** Based on the analysis of the KPI results, identify specific areas that require remediation or enhancement. This may include areas where performance falls below the target, where student learning outcomes need improvement, or where curriculum adjustments are necessary to align with industry standards. The responsible person/group for this action will be the Program Leadership Team in collaboration with faculty members.
3. **Development and Implementation of Improvement Strategies:** Define logical next steps to address the identified improvement areas. This may involve developing action plans, implementing pedagogical changes, revising curriculum content, or enhancing instructional methods to better support student learning and program outcomes. The responsible person/group for this action will be the Program Leadership Team in collaboration with faculty members.
4. **Continuous Program Evaluation:** Establish a cyclical process for ongoing program evaluation to ensure that the implemented improvement strategies are effective and impactful. Regularly assess the outcomes of the improvement efforts, collect feedback from stakeholders, and make necessary adjustments based on the evaluation findings. The responsible person/group for this action will be the Assessment and Evaluation Committee within the program. Completion date: Ongoing, with regular program evaluations.

These actions reflect our commitment to continuous improvement and the enhancement of the program based on the analysis of the KPI results. Through the implementation of these actions, we aim to ensure that the program evolves and adapts to meet the needs of students and stakeholders, while maintaining a focus on achieving the desired outcomes.

Update to Previous Cycle's Plan for Continuous Improvement Item

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

Closing Summary

- Continue the effort to change the current minor title ‘**Industrial Safety Management**’ to ‘**Safety Management**’.
- Continue the practice to review and update the curriculum, including creating new and revising existing courses as needed.

Update of Progress to the Previous Cycle's PCI:

During the current cycle, we have focused on maintaining the high standards and quality of our program in Industrial Safety Management. While there have been no new improvements implemented during this period, we remain committed to ensuring the program's effectiveness and relevance.

Our program continues to provide students with a comprehensive understanding of environmental health, safety regulations, hazard awareness, and workplace safety practices. Through a rigorous curriculum and engagement with industry professionals, we strive to equip our students with the knowledge and skills necessary to excel in their future careers.

We recognize that continuous improvement is an ongoing process, and we remain dedicated to monitoring industry trends, advancements, and best practices. This allows us to ensure that our program remains up-to-date and aligned with the evolving needs of the field.

Moving forward, we will continue to evaluate feedback from students, faculty, and industry partners to identify areas where enhancements can be made. These assessments will inform future improvement plans and initiatives.

New Plan for Continuous Improvement Item

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.