

Subject Description Form

Subject Code	CSE40445
Subject Title	Safety Management and Audit
Credit Value	3
Level	4
Pre-requisite	CSE374
Objectives	To help students understand the organizational needs and identify the key areas of concern and barriers to effective implementation of safety management systems.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ul style="list-style-type: none">a. apply sound management principles and good practices for managing safety at work in a complex, dynamic working environment;b. design and develop a safety management system consisting of the key safety management functions, essential process elements and implementation strategies;c. have a basic knowledge of the objectives of a formal audit, and its implementation in accordance with the underlying principles and legislative requirements; andd. exercise professional judgment and propose methods of improvement based on the audit findings.
Subject Synopsis/ Indicative Syllabus	<ul style="list-style-type: none">1. <u>Introduction to Safety Management</u> Trends and career development in safety and health management. Legal requirements and liability. Introduction to safety management systems, international standards, codes of practice.2. <u>Policy and Objectives</u> Purpose, concepts and principles of safety and health management. Risk-based approach vs. performance-based approach. Formulation of safety and health policy. Safety goals and performance targets in policy design and development. Barriers to the development of effective policies.3. <u>Safety Management Functions and Key Process Elements</u>

	<p>Concept of “Plan-Do-Check-Act” continuous improvement cycle. Key functions and essential process elements of an effective safety and health management system. Framework of safety and health management.</p> <p>4. <u>Measurement and Monitoring of Safety Performance</u></p> <p>Setting of performance standards and criteria. Positive and negative performance indicators, their advantages and disadvantages. Measurement of safety performance. Techniques for monitoring performance.</p> <p>5. <u>Planning and Implementation</u></p> <p>Development and implementation of systems, health & safety plans, guidelines and procedures. Implementation strategies, barriers and constraints. Key drivers of a successful safety and health management programme. Managing organizational change.</p> <p>6. <u>Safety Culture</u></p> <p>Elements of safety culture and its relationship with leadership and worker participation. Different stages, indicators and measurement of safety culture.</p> <p>7. <u>Audit Fundamentals</u></p> <p>Audit as a process element of Safety Management. Defining the roles of safety audit and review. Ethics issues. Purposes and principles. Relationship between audit and performance standards / indicators. Audit methods, procedures and techniques. Audit plans. Data collection and analysis. Interview techniques.</p> <p>8. <u>Audit Systems</u></p> <p>International safety and health audit systems, standards, or specifications. Gap analysis – identification of strengths, weakness and areas for improvement.</p> <p>9. <u>Audit Reports and Related Issues</u></p> <p>Writing of audit reports, purpose and principles. Understanding relationship between recommendations and “best practices”. Effective use of review / audit findings to improve safety performance.</p>
Teaching/ Learning Methodology	<p>A combination of group discussions, assignments and case studies will be used to develop students’ understanding of the purpose, principles and the related professional practices. By relating the lecture materials</p>

	with case studies, examples and best practices, students will be able to develop the necessary knowledge and skills for the planning, implementation and review/audit of a safety and health management system.					
Assessment Methods in Alignment with Intended Learning Outcomes						
	Assessment Methods	Weighting (%)	Intended Learning Outcomes Assessed			
			a	b	c	d
	1. Test/ Quizzes	10	✓	✓		
	2. Case Study/ Audit Plan	5	✓	✓		
	3. Audit Report and Presentation	25		✓	✓	✓
	4. Final Examination	60	✓	✓	✓	✓
	Total	100				
Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: For continuous assessment: <ul style="list-style-type: none">▪ In order to achieve Outcomes a and b, test/ quizzes are used to test student understanding. In order to achieve Outcomes c and d, students are required to analyze a case scenario and compile an audit report. Written examination is to test the student understanding and the application of principles related to all the learning outcomes. Students must pass the final examination and achieve a passing overall score/ grade to pass the subject,						
Student Study Effort Required	Class contact			Average hours per week		
	▪ Lectures/ Tutorials			3 Hrs.		
	Other student study effort					
	▪ Coursework			2.8 Hrs.		
	▪ Self Study			3.2 Hrs.		
	Total student study effort			9 Hrs.		

<p>Reading List and References</p>	<p>Essential Textbook:</p> <p>Roughton, J.E., Mercurio, J.J. & Heinemann, B., 2002, <i>Developing an Effective Safety Culture: A Leadership Approach</i>, Butterworth-Heinemann.</p> <p>Reference Textbooks:</p> <ol style="list-style-type: none"> 1. Stewart, J.M., 2002, <i>Managing for World Class Safety</i>, Wiley. 2. Asfahl, C. Ray & Rieske, David W., 2009, <i>Industrial Safety and Health Management</i>, 6th edition, Prentice Hall.
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