manufacturing
Safety Alliance of BC

OHS Occupational Health and Safety Competency Framework

Defining competency standards for OHS Professionals in BC's Manufacturing Sector | 2021

Prepared by the Manufacturing Safety Alliance of BC

The Manufacturing Safety Alliance of BC (the Alliance) is a not-for-profit, industry driven, industry-funded health and safety association for manufacturing and food processing companies in British Columbia.

manufacturing
Safety Alliance of BC

Canada

BRITISH COLUMBIA

Funding provided through the Canada-British Columbia Labour Market Development Agreement.

Prepared for the British Columbia Ministry of Advanced Education, Skills and Training.

The views and opinions expressed in this report are those of the project partners and do not necessarily reflect the official policy or position of the BC government.

Table of Contents

Preface

In 2015, the Manufacturing Safety Alliance of BC entered a Sector Labour Market Partnership (SLMP) agreement with the Ministry of Jobs, Tourism and Skills Training (now the Ministry of Advanced Education, Skills and Training) to assess the labour market issues in the manufacturing sector with respect to the occupational health and safety (OHS) profession. One fundamental need that emerged is the standardization of competencies for OHS professionals in the manufacturing sector. Industry consultation identified the need for clear definition of the skills and competencies that OHS professionals in manufacturing should possess to be effective in their role. Such a profile would minimize the confusion faced by employers and professionals when confronted with the diversity of OHS certifications and designations currently available in Canada.

The SLMP Phase 3 Strategy report published in 2018 recommended establishing, as an initial stage in a four-pronged approach, a manufacturing-specific OHS competency and capability framework to standardize qualifications, skills, knowledge, and abilities in the OHS occupation.

To access the reports from previous project phases, visit:
safetyalliancebc.ca/sector-labour-market-partnership

SECTOR BACKGROUND AND CONTEXT

The future of BC's manufacturing sector depends upon how effectively companies meet four major challenges. These include: the changing nature of manufacturing work; an aging workforce resulting in increased retirements and the recruitment of younger workers; the accelerating pace of technological change; and economic globalization that is evolving in unpredictable ways. These challenges create new occupational health and safety risks. Firms' responses to these risks, led by their occupational health and safety professionals, will shape the sectors' future success.

The COVID-19 pandemic has highlighted the importance of health and safety in BC, nationally and globally. In particular, the value of healthy and safe practices in manufacturing and food processing have become starkly evident. These businesses create essential products with an on-site workforce, whose productivity and retention depends on their mental and physical well-being. Ensuring that qualified health and safety personnel are able to support industry to manage current and emerging risks has never been so critical.

DOCUMENT PURPOSE

The Occupational Health and Safety Professional Competency Framework (the "Framework") encompasses the full scope of practice for an occupational health and safety professional operating in the manufacturing sector. It was developed in partnership with industry and subject matter experts, undergoing a rigorous and multi-leveled validation process to help ensure a framework that is both comprehensive, but also includes considerations for factors such as employer size, region, and manufacturing sub-sector.

According to the International Organization for Standardization (ISO), "competence" is defined as "the ability to apply knowledge and skills to achieve intended results." In the context of OHS professionals in manufacturing, there is a wide variety of knowledge and skills in which competence is required to be effective and "achieve intended results". For the purposes of developing this Framework, "competent" is defined as a measured state in which a worker possesses the necessary qualifications, requisite experience, and demonstrated skill required to work without immediate oversight or supervision.

Building on this definition, a competency is an outcome-based unit of knowledge or combined skills that can be demonstrated to a pre-defined standard. This outcome-based demonstration of competence is used as evidence to support the claim by an OHS professional that they are able to achieve the intended results of a particular task or job function.

This Competency Framework is intended to inform these specific aspects of the OHS profession in manufacturing:

- *The translation of qualifications and certifications into statements of competence.*
- *The development of OHS training resources and programs, such as micro or macro credentials.*
- *The requirements for certifying OHS professionals.*
- *The process of hiring OHS professionals.*
- *The education and professional development pathways available to OHS professionals.*

Practically, the Framework is designed to provide a guide for all stakeholders in BC's manufacturing sector as they undertake the education, training, recruitment, and deployment of OHS professionals.

Introduction

As an area of research and professional practice, occupational health and safety (OHS) has had to respond to the steady onslaught of changes transforming the nature of work. These range from the massive shift to a service-based knowledge economy, the information technology evolution, and globalization to increasingly diverse workforce demographics. Most recently, OHS has been pushed into the public spotlight by the COVID-19 pandemic. As a result of these factors, the scope of OHS expertise has been greatly expanded to incorporate rapid advances in our understanding of the causes and consequences of occupational ill-health, disease, disability, and injury.

Today, the OHS profession is multi-disciplinary, including occupational and environmental medicine, epidemiology, workplace health and safety, occupational and industrial hygiene, mental health and well-being, and human factors. Increasingly, the role of worksite OHS professionals requires knowledge of, and collaboration with, other disciplines including environmental protection, product safety, emergency response, security, rehabilitation, law, and insurance. OHS professionals advise policymakers and industry on a broad range of issues, including workplace risk and hazard assessment, injury and fatality prevention, effective return-to-work practices for injured workers, and the associated human and business costs of unsafe and unhealthy workplaces.

While a focus on regulatory compliance to meet legislated health and safety standards remains important, the OHS profession is shifting to a more preventative and holistic approach. OHS professionals are not only required to advise their employer on prevention and promotion practices using a much larger evidence-base, they also must be able to influence, engage and coach managers, employees, and joint health and safety committees on how to create and maintain a safety culture. As a result, OHS professionals require interpersonal, management, industry, and technical skills directly relevant to the nature of the business.

Today the OHS profession in Canada is unregulated. A wide array of certifications and credentials provide little consistent and reliable information on what a credentialed individual is competent to do. Defining the body of knowledge and skills for the OHS profession is a critical first step towards establishing standards for the OHS profession, beginning with BC's manufacturing sector. Ultimately, establishing accredited paths for professionals to develop robust OHS competencies will improve workplace safety in all industries and position BC as a global leader in workplace health and safety.

HOW TO USE THE OHS COMPETENCY FRAMEWORK

The Framework provides value to a variety of audiences, including OHS professionals, employers, workers, and educators. This document is not designed to be read cover to cover. Different stakeholders may find it relevant to only focus on certain segments. This section provides an overview of the structure, contents, and intended purpose of the *OHS Competency Framework*.

The Framework has been developed as an outcome-based competency system. This means that the building blocks of the Framework are outcome-based statements describing tasks, knowledge, or processes in which an OHS professional can demonstrate observable competence. Taken as a whole, the Framework encompasses the full scope of practice for the OHS profession. Individual OHS professionals may need certain competencies more than others, depending on the requirements of their workplace. As a result, this Framework is not intended to be a list of requirements for what every OHS professional must demonstrate to be considered competent. Instead, its intended purpose is to act as a resource for:

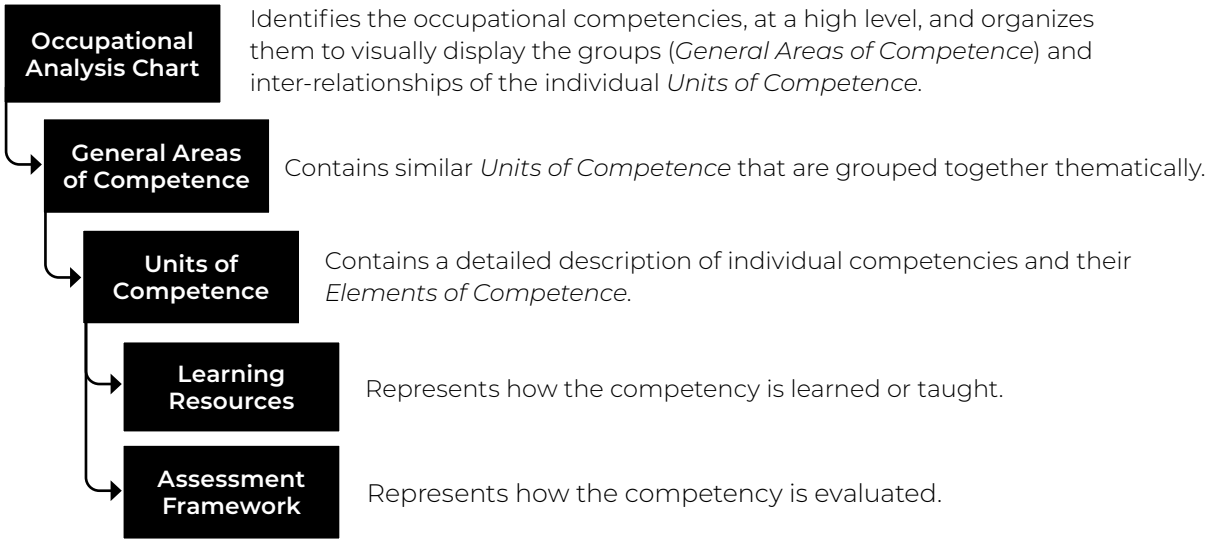
Facilitating communication between OHS professionals and current or future employers.

Building professional development plans.

Developing curricula or assessments.

The structure of the Framework resembles a book (See Figure 1). We begin with an *Occupational Analysis Chart*, which provides an at-a-glance view of the contents of the entire Framework (See Appendix A). Then come "chapters" and "pages". The chapters are the *General Areas of Competence*, which are organized thematically by topic, and the pages are the *Units of Competence*, which provide the detailed content of the Framework.

Figure 1: Framework Structure Outline



OCCUPATIONAL ANALYSIS CHART

The *Occupational Analysis Chart* (See Appendix A) identifies the competencies that define the scope of practice for the OHS profession. The chart displays the *General Areas of Competence* and the corresponding *Units of Competence*—the detailed occupational skills and work activities—for the occupation. This Framework breaks the *General Areas of Competence* into two sections: *Core Competencies* and the *Manufacturing-Specific Knowledge Areas*.

The *Core Competencies* encompass the general knowledge, skills, and abilities for the professional to be an effective OHS resource in any industry.

The *Knowledge Areas* represent the domains of risk which are prominent within manufacturing. In the same way that medical professionals possess core knowledge and skills that they apply in different specializations, each of these *Knowledge Areas* also is reflected in the *Core Competencies*.

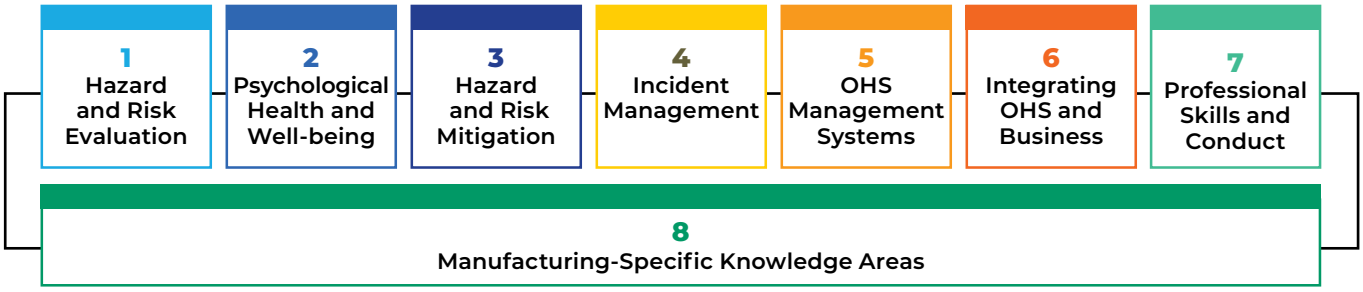
For example, an OHS professional should be competent to perform inspections and risk assessments at a general practice level. However, that same professional may not possess the expertise needed to effectively manage confined spaces or machine safeguarding hazards without additional training, experience, or certification. While no OHS professional is expected to act as a subject matter expert in all of the *Knowledge Areas*, they must possess sufficient knowledge to identify when outside expertise is needed. In this way, the *Knowledge Areas* are potential specialized areas of application for the whole of the *Core Competencies*.

Both the *Core Competencies* and the *Manufacturing-Specific Knowledge Areas* are further partitioned in to *General Areas of Competence*, described in the next section.

GENERAL AREAS OF COMPETENCE

The *General Areas of Competence*, shown below, describe the two sections of the *Competency Framework* for the OHS professional: *Core Competency* and *Manufacturing-Specific* areas.

Figure 2: General Areas of Competence



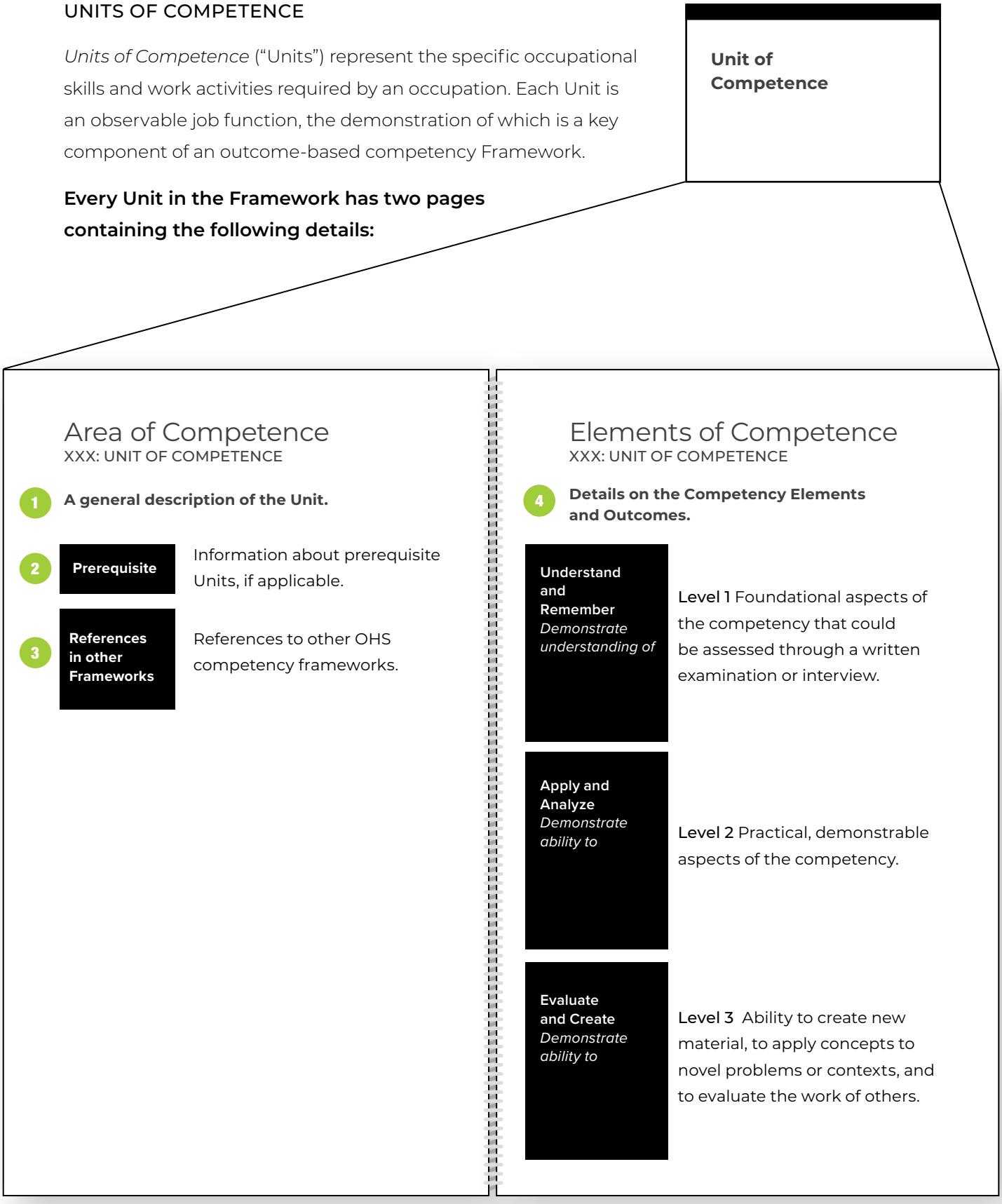
Each *General Area of Competence* represents a thematic grouping of core and manufacturing-specific competencies for OHS professionals.

Depending on the specific roles and responsibilities of OHS professionals in different work contexts, some *Units of Competence* will be more relevant than others, but all areas contain certain fundamental knowledge and skills that should be universal to any OHS professional working in the manufacturing sector.

UNITS OF COMPETENCE

Units of Competence ("Units") represent the specific occupational skills and work activities required by an occupation. Each Unit is an observable job function, the demonstration of which is a key component of an outcome-based competency Framework.

Every Unit in the Framework has two pages containing the following details:



1 Description

The description provides a brief overview of the scope of knowledge and skills that the Unit captures, as well as highlighting how competence in this area enables the OHS professional to function effectively in the workplace.

2 Prerequisites

Where applicable, Units contain linkages to prerequisite knowledge and skills required as a foundation. These connections provide guidance on the ideal learning and development path. These prerequisites are non-exhaustive and are intended to act as a guidance tool only. In many areas of OHS it is necessary to possess a myriad of complementary skills and competencies which are used in concert.

3 References to other Frameworks

As an additional source of information providing context to the Unit's content, other recognized competency frameworks have been referenced.[1] The frameworks referenced are those used by the following bodies:

- The Board of Canadian Registered Safety Professionals (BCRSP)
- The Institution of Occupational Safety and Health (IOSH)
- The International Network of Safety & Health Professional Organisations (INSHPO)

These frameworks are referenced with the intention of providing useful background information, to facilitate understanding and provide a starting point for OHS professionals looking to develop their competency in the Unit. The documents referenced are:

- *Blueprint for the Canadian Registered Safety Professional Examination (CRSPEX) (Board of Canadian Registered Safety Professionals, 2020)*
- *Competency Framework: Professional standards for safety and health at work (Institution of Occupational Health and Safety, 2019)*
- *The Occupational Health and Safety (OHS) Professional Capability Framework: A Global Framework for Practice. Knowledge matrix mapped to the OHS Body of Knowledge (Australian Institute of Health & Safety, 2017)*

The references provided in the Framework use the indexing system unique to each document, providing direction to the specific section where content of interest related to the Framework competencies may be found.

---

1 These competency frameworks were consulted in the development of the OHS Professional Competency Framework.

4 Competency Details

Each Unit comprises *Elements of Competence* ("Elements") and *Competence Outcomes* ("Outcomes"). The *Elements* describe the aspects of competency possessed by an OHS professional in a particular Unit. The *Outcomes* explain how an OHS practitioner demonstrates their competence, skills, and knowledge in a particular Element. The *Elements and Outcomes* can facilitate the development of curricula and assessments, employment interviews, and professional development planning.

Each Element describes one of three levels of competence. These levels represent a continuum of development for OHS professionals. For example, the third level of competency uses language and concepts which an OHS professional may continually develop towards.

Element of Competence: Level 1

The first level of competence is *Understand and Remember*. Outcomes in this level describe the relevant knowledge, standards, and OHS processes that are foundational aspects of the competency. These competencies could be assessed through a written examination or interview and are required to develop the skills described in Levels 2 and 3.

Element of Competence: Level 2

The second level of competence is *Apply and Analyze*. Outcomes in this level describe the types of tasks performed and knowledge application. These are the practical, demonstrable aspects of the competency. Level 2 skills require the foundational knowledge described in Level 1 and the ability to use that knowledge in the workplace in a way that can be demonstrated to an observer.

Element of Competence: Level 3

The third level of competence is *Evaluate and Create*. Outcomes in this level describe the creative and assessment-oriented applications of knowledge and skills, reflecting the highest degree of attainment for the competency. Level 3 requires foundational knowledge plus thorough competence in the application of a Unit's knowledge and skills. Effectiveness at this level is demonstrated through the ability to create new material, to apply concepts to novel problems or contexts, and to evaluate the work of others.

Viewed together, these *Elements of Competence* provide the continuum of development for OHS professionals. They are open-ended and evolving. Because these details in each level cannot be listed exhaustively, OHS professionals must assess the relevance of each Element to their own workplace and adapt accordingly.

Learning and Assessment

This Framework promotes the continual development of professional skills and expertise in a variety of ways. At the *General Areas of Competence* level, the first Units in each section begin with "*Demonstrate understanding of ….*" These competencies are considered fundamental and are foundational occupational skills for OHS professionals. When combined with prerequisite Units, these first units provide guidance on education and the learning pathways for OHS practitioners and aspiring professionals.

Currently, no certifications or assessment resources have been aligned with this Framework. In short, no accredited assessments exist. In the interim, the Competence Outcomes portion of each Unit can facilitate self-assessment by OHS professionals and collaborative assessment between OHS professionals and their employers, or interviewers in the recruitment process. Evaluations of competence should be conducted with careful consideration of the degree to which the OHS professional is able to affirm that they possess the details provided in the *Elements of Competence* section of each Unit.

Similarly, evaluating learning resources also requires careful consideration. In assessing the adequacy of learning resources, several factors are most important:

Practical experience provided:
OHS professional education should involve practical experience and mentorship.

Diversity of skills and knowledge provided:
OHS professional education should enable learners to apply knowledge in a wide array of contexts.

Length of education program:
Learners should seek out education and training programs which emphasize completeness and practical application over speed of completion.

Additional Information and Resources

Meeting the needs of industry and OHS professionals requires the ongoing development of information and resources, ensuring that the Framework adapts to current and emerging risk areas within the manufacturing sector. Continual improvement of the Framework is also critical for guiding professional development plans as well as informing training and education curricula.

To view the most current version of the Framework, and to access additional tools and educational materials associated, please visit the Manufacturing Safety Alliance of BC website: safetyalliancebc.ca/sector-labour-market-partnership

Occupational Health and Safety Professional Competency Framework

Below are the Areas of Competence that make up the scope of practice for an OHS professional in the manufacturing sector.

The Areas of Competence are split into two sections:

- Core Competencies (Areas 1 - 7)
- Manufacturing-Specific Knowledge Areas (Area 8)

The Core Competencies encompass the general knowledge, skills, and abilities for the professional to be an effective OHS resource in any industry. The Knowledge Areas represent the domains of risk which are prominent within manufacturing.

1 Hazard and Risk Evaluation

2 Psychological Health and Well-Being

3 Hazard and Risk Mitigation

4 Incident Management

5 Occupational Health and Safety Management Systems

6 Integrating OHS and Business

7 Professional Skills and Conduct

8 Manufacturing-Specific Knowledge Areas

APPENDIX A Occupational Analysis Chart

1 HAZARD AND RISK EVALUATION

101 Demonstrate understanding of hazards in the workplace	**102 Demonstrate** understanding of models of incident causation and their application **Prerequisite 101**	**103 Demonstrate** understanding of control principles and their application **Prerequisite 102**	**104 Demonstrate** understanding of environmental aspects of business processes	**105 Evaluate** administrative controls	**106 Evaluate** human factors and process controls	**107 Evaluate** PPE controls	**108 Evaluate** engineering and physical barrier controls	**109 Evaluate** emergency response procedures	**110 Assess** new and emerging risks

2 PSYCHOLOGICAL HEALTH AND WELL-BEING

201 Demonstrate understanding of the Standard for Psychological Health and Safety in the Workplace	**202 Demonstrate** understanding of workplace factors that in uence worker well-being	**203 Demonstrate** understanding of the needs of vulnerable workers	**204 Communicate** and apply strategies and practices to improve psychological health and safety in the workplace	**205 Demonstrate** ability to respond to OHS relevant psychology scenarios	**206 Evaluate** psychological hazard controls	**207 Implement** strategies and practices to improve organizational culture and climate

3 HAZARD AND RISK MITIGATION

301 Demonstrate understanding of physiological and psychological aspects of worker safety	**302 Demonstrate** understanding of risk in the workplace **Prerequisite 301**	**303 Identify** risks and use risk pro ling tools **Prerequisite 302**	**304 Prioritize** risks **Prerequisite 303**	**305 Perform** inspections **Prerequisite 304**	**306 Develop** risk assessment reports **Prerequisite 305**	**307 Mitigate** risks	**308 Monitor** and develop ongoing risk reports **Prerequisite 307**	**309 Provide** recommendations for corrective action with supporting rationale (Principles of OHS science and engineering)	**310 Develop** business continuity plans

4 INCIDENT MANAGEMENT

401 Demonstrate understanding of the legal implications of incident management	**402 Identify** the appropriate principles and actions associated with incident management	**403 Report** incidents	**404 Perform** investigative interviews	**405 Conduct** an incident cost analysis	**406 Conduct** incident investigations and provide recommendations for corrective action	**407 Evaluate** OHS incident management procedures

5 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS

501 Demonstrate understanding of Occupational Health and Safety Management System	**502 Demonstrate** understanding of quality management processes and their integration with OHS **Prerequisite 501**	**503 Use and maintain** an OHS document management system **Prerequisite 502**	**504 Monitor** OHS performance **Prerequisite 503**	**505 Perform** OHS management system audits	**506 Develop** health and safety policy	**507 Administer** an OHS management system	**508 Provide** OHS training and instruction

6 INTEGRATING OHS AND BUSINESS

601 Demonstrate understanding of fundamentals of business administration and operations	**602 Demonstrate** understanding of the intersection between OHS and human resource processes	**603 Support** a Joint Health and Safety Committee	**604 Perform** information gathering, data analysis, and forecasting	**605 Contribute** to OHS strategy development	**606 Manage** OHS-related workplace projects	**607 Develop** and implement an OHS continuous improvement plan	**608 Integrate** health and safety with corporate social responsibility	**609 Utilize** nancial planning strategies	**610 Demonstrate** evidence-based decision making practices	**611 Identify** and implement methods for risk evaluation and decision making in a business environment

7 PROFESSIONAL SKILLS AND CONDUCT

701 Demonstrate understanding of legislation, regulations, and standards for OHS	**702 Demonstrate** understanding of health and safety governance	**703 Communicate** effectively in the workplace	**704 Demonstrate** problem-solving ability	**705 Manage** stakeholders	**706 Practice** ethical and professional conduct	**707 Adhere** to personal responsibilities and accountabilities

8 MANUFACTURING-SPECIFIC KNOWLEDGE AREAS

801 Autonomous equipment, robotics, and machine safety **Prerequisite core areas**	**802** Combustible dust safety **Prerequisite core areas**	**803** Con ned space safety **Prerequisite core areas**	**804** Contractor safety **Prerequisite core areas**	**805** Cyber security risks and hazards **Prerequisite core areas**	**806** Electrical safety **Prerequisite core areas**	**807** Ergonomics and human factors **Prerequisite core areas**	**808** Fall protection **Prerequisite core areas**	**809** Handling and transportation of dangerous goods **Prerequisite core areas**	**810** Hot work safety **Prerequisite core areas**
811 Lockout and de-energization in isolation **Prerequisite core areas**	**812** Mobile equipment safety **Prerequisite core areas**	**813** Occupational hygiene **Prerequisite core areas**	**814** Overhead crane and hoist safety **Prerequisite core areas**	**815** Radiation safety: Ionizing **Prerequisite core areas**	**816** Radiation safety: Non-ionizing **Prerequisite core areas**	**817** Supply chain safety **Prerequisite core areas**	**818** Toxic process safety **Prerequisite core areas**	**819** Transportation and warehousing safety **Prerequisite core areas**	**820** Working alone or in isolation **Prerequisite core areas**

The *Occupational Analysis Chart*, including both the *Core Competencies* and *Manufacturing-Specific Knowledge Areas*, is represented in the following pages.

This chart displays the *Areas of Competence* and the corresponding *Units of Competence* for an occupational health and safety professional operating in the manufacturing sector.

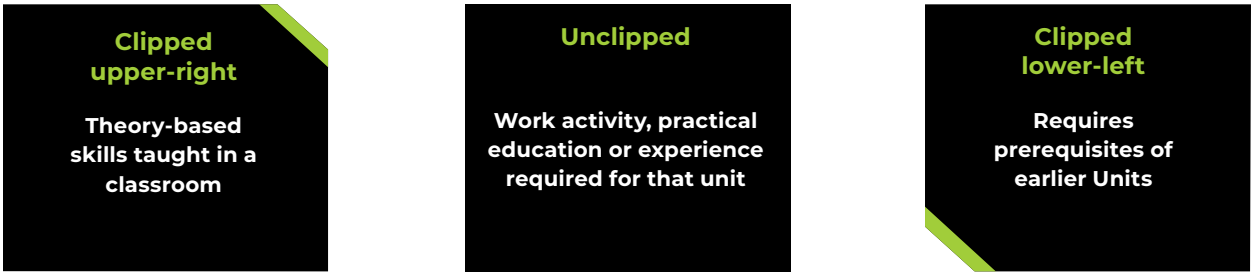
ABOUT THE OHS COMPETENCY MATRIX

Throughout this document, a system is used to help distinguish aspects of each *Unit of Competence*. The shape of the Unit provides guidance on the **teaching methodology** and **prerequisites**.

Teaching methodology

Each Unit has either a **clipped corner** or is **unclipped** (a full square). Units with **clipped upper-right corners** represent theory-based occupational skills and elements which may be taught in a classroom-only setting. These Units are indicated through the language of *Demonstrate*...

Units that are **unclipped** represent work activities, practical education or experience required for that Unit. These Units are verb-forward using a word such as *Identify, Develop,* or *Evaluate*.
In this chart, Units using the verb *Evaluate* are considered to be the highest level of responsibility.



Prerequisites

All Units with **prerequisite** knowledge or skills are indicated through the use of a **clipped lower-left corner**. These Units require both direct and indirect (prerequisites of earlier Units) connections.

These prerequisites are intended to inform the order of learning for professional development by individuals and for the development of curricula. Units without specific prerequisites are ordered according to their presumed level of responsibility and order of learning.

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation 1

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas

1

1 Hazard and Risk Evaluation

OHS professionals are an integral part of the front-line of defense against workplace incidents. The evaluation of hazards and risks is a fundamental skill of the OHS professional that is critical for risk mitigation, occupational health and safety management systems, and continuous improvement processes. Many hazards and risks are common across different workplaces and sectors of industry, but even the most unique hazards and risks are assessed and controlled following a common set of principles.

101 Demonstrate
Understanding of hazards in the workplace

102 Demonstrate
Understanding of models of incident causation and their application

Prerequisites: 101

103 Demonstrate
Understanding of hazard control principles and their application

Prerequisites: 102

104 Demonstrate
Understanding of environmental aspects of business processes

105 Evaluate
Administrative controls

106 Evaluate
Human factors and process controls

107 Evaluate
Personal protective equipment controls

108 Evaluate
Engineering and physical barrier controls

109 Evaluate
Emergency response procedures

110 Assess
New and emerging risks

101 Hazard and Risk Evaluation

101: DEMONSTRATE UNDERSTANDING OF HAZARDS IN THE WORKPLACE

The ability to evaluate hazards and risks is a fundamental skill of the OHS professional. Many hazards and risks are common across different workplaces and sectors of industry, but even the most unique hazards and risks are assessed and controlled following a common set of principles. A general understanding of hazards in the workplace includes methods of hazard identification and analysis, and basic knowledge of hazard-specific legislative requirements.

An OHS professional should demonstrate a thorough understanding of the following concepts:

- Process and task safety analysis methods
- Complex hazard analysis methods
- Knowledge of exposure standards and their application
- Hazard-specific legislation and standards

In the context of job-specific hazards an OHS professional should be aware of:

- Basic underpinning science to understand the hazard's behaviour, how it creates risk, how it causes damage, and how it can be controlled
- Mechanisms of damage, injury, and health outcomes, including those leading to material unwanted events
- How the hazard occurs in a manufacturing environment
- Risk factors

Prerequisites	
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRIA2, HRIA3, HRIA6, THSS1, THSS2 International Network of Safety & Health Professional Organisations: A5, E21, E22

101: DEMONSTRATE UNDERSTANDING OF HAZARDS IN THE WORKPLACE

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to workplace hazards
- Primary types of hazards:
  - Physical
  - Ergonomic
  - Chemical
  - Biological
  - Psychological
- The purpose and process of a job safety analysis
- Hazard analysis methods such as:
  - Failure Modes and Effects Analysis (FMEA)
  - Hazard and Operability Study (HAZOP)
  - Fault Tree Analysis (FTA)
  - Bowtie Analysis

Apply and Analyze
Demonstrate ability to

- Communicate the purpose of Job Safety Analyses
- Communicate examples of the primary classifications of hazards
- Communicate the purpose of and process of a hazard analysis methods
- Conduct a job safety analysis
- Research and gather information from appropriate sources on hazard-specific legislation, regulation, and exposure standards
- Identify hazards and risk factors in the workplace

Evaluate and Create
Demonstrate ability to

- Explain the process of job safety analyses
- Evaluate the quality and completeness of existing Job Safety Analyses
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop job safety analysis processes for a workplace
- Develop hazard analysis processes for a specific workplace context using methods, such as:
  - Failure Modes and Effects Analysis (FMEA)
  - Hazard and Operability Study (HAZOP)
  - Fault Tree Analysis (FTA)
  - Bowtie Analysis

102: DEMONSTRATE UNDERSTANDING OF MODELS OF INCIDENT CAUSATION AND THEIR APPLICATION

OHS incidents are the result of one or more causes, and can be prevented or mitigated with the appropriate controls in place. Identifying the appropriate controls for different hazards requires the OHS professional to possess an understanding of the mechanisms of incident causation. When OHS incidents do occur, determining the causes of the incident is a necessary step of incident investigations that enables employers to improve safety systems or operational practices and prevent recurrence.

In order to act as an effective resource, OHS professionals should be familiar with:

- Models of causation
- Using appropriate models to inform incident investigations
- Explaining and communicating principles of causation
- Evaluating the effectiveness of existing or proposed risk management controls against the model(s) of causation and, where required, develop new or modified controls informed by the concepts behind the model(s)

Prerequisites	101
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRIA1, THSS13, HSM14 International Network of Safety & Health Professional Organisations: A1, A2

102: DEMONSTRATE UNDERSTANDING OF MODELS OF INCIDENT CAUSATION AND THEIR APPLICATION

Understand and Remember *Demonstrate understanding of*	• Models of incident causation • Tools and techniques used to determine incident root causes and contributing factors

Apply and Analyze *Demonstrate ability to*	• Communicate principles of causation
	  ◦ In the context of a conversation
	  ◦ In the context of a report
	• Apply appropriate models in the context of incident investigations
	  ◦ Correctly identify incident root causes and contributing factors

Evaluate and Create *Demonstrate ability to*	• Explain principles and models of causal analysis
	• Evaluate the effectiveness of existing or proposed risk management controls against the model(s) of causation
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop new or modified controls informed by the concepts behind the model(s)

103: DEMONSTRATE UNDERSTANDING OF HAZARD CONTROL PRINCIPLES AND THEIR APPLICATION

All organizations have hazards present in the workplace. It is the responsibility of the employer to ensure that these hazards are adequately controlled, which often requires the expertise of an OHS professional to implement necessary training programs and hazard monitoring systems.

In order for an OHS professional to act as an effective resource, they must demonstrate a thorough understanding of hazard control principles and their application in a variety of contexts. This includes demonstrating understanding of:

- Hierarchies of control, barriers and defences, critical controls, requisite variety of controls
- Inherent safety and engineered safe design
- Time sequence of pre-event, event, post-event, and the relevant control and intervention points
- Criteria for critical controls and principles of critical control management

Prerequisites	102
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRCM1, HRCM2, HRCM3, HSM14, HRCM5 International Network of Safety & Health Professional Organisations: A2, B6

103: DEMONSTRATE UNDERSTANDING OF HAZARD CONTROL PRINCIPLES AND THEIR APPLICATION

Understand and Remember *Demonstrate understanding of*	• The hierarchy of controls: 1. Elimination 2. Substitution 3. Engineering controls 4. Administrative controls 5. Personal protective equipment (PPE) • The implementation of different control types • Inherent safety and engineered safe design • Time sequence of pre-event, event, post-event, and relevant control and intervention points • Criteria for critical controls and principles of critical control management • How control systems should be evaluated on an ongoing basis
Apply and Analyze *Demonstrate ability to*	• Apply and maintain existing hazard controls and processes • Provide training to workers regarding hazards and controls
Evaluate and Create *Demonstrate ability to*	• Evaluate workforce understanding of hazards and controls • Develop controls for identified workplace hazards • Evaluate effectiveness of controls and modify controls from analysis • Develop training for workplace specific hazards and controls • Monitor and evaluate effectiveness of training and modify for improvement

104: DEMONSTRATE UNDERSTANDING OF ENVIRONMENTAL ASPECTS OF BUSINESS PROCESSES

In many situations, the OHS professional is required to provide input to, if not fully oversee, the environmental management program of an organization.

In order to act as a valuable resource in this context, an OHS professional should demonstrate understanding of the processes and implications of environmental harm:

- Models of environmental harm (air, water, soil)
  - Environmental release
- Compliance models
  - Adherence to legislation and regulations
  - Documentation requirements for waste management
  - Tracking and measurement

In these scenarios, the OHS professional needs to consider the impact to the environment in assessing hazards and identifying controls to minimize harm. OHS professionals need to apply hazard and risk strategies that minimize impact to the environment to support business sustainability.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM20
International Network of Safety & Health Professional Organisations: A3, B6

104: DEMONSTRATE UNDERSTANDING OF ENVIRONMENTAL ASPECTS OF BUSINESS PROCESSES

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to environmental harm and protection • Relevant legislation, regulations, guidelines, and standards that pertain to waste management • How business operations processes can release hazardous material into the environment • Resource management (energy, water, gas) ◦ Tracking and reporting

Apply and Analyze *Demonstrate ability to*	• Apply existing environmental incident response processes:
	  ◦ Facilitate communication
	  ◦ Facilitate emergency response processes
	  ◦ Reporting and follow-up
	• Apply existing waste management strategies or processes
	• Apply existing resource use reduction strategies or processes

Evaluate and Create *Demonstrate ability to*	• Evaluate existing procedures and strategies to find areas for improvement and areas of excellence:
	  ◦ Environmental incident response procedures and plans
	  ◦ Resource use reduction strategies
	  ◦ Waste management strategies
	• Develop and implement new procedures and strategies, or adapt existing in response to changes in the workplace context:
	  ◦ Environmental incident response procedures and plans
	  ◦ Resource use reduction strategies
	  ◦ Waste management strategies

105: EVALUATE ADMINISTRATIVE CONTROLS

In the hierarchy of controls, administrative controls are preferable to personal protective equipment (PPE) controls, but less desirable than controls which remove access to the hazard entirely. Beyond the ongoing maintenance of controls, an OHS professional should demonstrate the ability to evaluate administrative controls which an organization has in place, identifying areas for improvement, as well as areas of excellence.

In order to act as an effective resource, the OHS professional should be able to:

- Demonstrate understanding of different types of administrative controls
- Maintain administrative controls
- Provide training in the adherence to administrative controls

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM2, HRCM7
International Network of Safety & Health Professional Organisations: A3, B6, B9, C16

105: EVALUATE ADMINISTRATIVE CONTROLS

Understand and Remember
Demonstrate understanding of

- Different types of administrative controls, such as:
  - Systems of work
  - Handovers
  - Permit-to-work systems
  - Lock-out-tag-out
  - Inspections
  - Maintenance and testing

Apply and Analyze
Demonstrate ability to

- Maintain administrative controls, such as:
  - Signage
  - Training and certification requirements
  - Standard Operating Procedures
  - Workplace policies
- Provide training in the adherence to administrative controls
- Conduct a training needs analysis
  - Provide recommendations for corrective action

Evaluate and Create
Demonstrate ability to

- Evaluate existing administrative controls
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop appropriate administrative control programs
  - Evaluate training processes
  - Evaluate policies and procedures with consideration for factors affecting procedural compliance
  - Evaluate outsourcing or contractor management procedures

106: EVALUATE HUMAN FACTORS AND PROCESS CONTROLS

An OHS professional should demonstrate a thorough understanding of process and ergonomic controls. Beyond the ongoing maintenance of controls, an OHS professional should demonstrate the ability to evaluate human factor or process controls that an organization has in place, identifying areas for improvement, as well as areas of excellence.

This includes process and ergonomic controls that impact the ability of workers to safely perform their tasks, for example:

- Process and equipment instrumentation and control
- Human factors and ergonomics (including physical and cognitive ergonomics)
- User-centered design
- Workplace layout
- Impact of technology, including automation
- Material, process, and workflow analysis

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM2, HRCM7, THSS3, THSS4, THSS14
International Network of Safety & Health Professional Organisations: B6, B9, B7, C16

106: EVALUATE HUMAN FACTORS AND PROCESS CONTROLS

Understand and Remember *Demonstrate understanding of*	• Different types of process and ergonomic controls • Types of injuries resulting from common ergonomic problems
Apply and Analyze *Demonstrate ability to*	• Communicate results or recommendations from an ergonomics assessment • Implement recommendations for improvements to workplace processes • Provide training in the adherence to ergonomic and process controls • Conduct a training needs analysis ◦ Provide recommendations for corrective action

Evaluate and Create *Demonstrate ability to*	• Evaluate existing process and ergonomic controls
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop appropriate process and ergonomic control programs
	  ◦ Evaluate training processes
	  ◦ Evaluate rules and procedures with consideration for factors affecting procedural compliance

107: EVALUATE PERSONAL PROTECTIVE EQUIPMENT CONTROLS

An OHS professional should demonstrate the ability to select, use, and maintain appropriate personal protective equipment (PPE). Beyond the ongoing use and maintenance of PPE control systems, an OHS professional should demonstrate the ability to evaluate PPE controls which an organization has in place to identify opportunities for improvement and areas of excellence.

This includes all aspects of PPE control programs, for example:

- Selecting PPE appropriate to the hazards present at a jobsite
- Performing fitting of PPE
- Providing training for PPE use and maintenance
- Providing training for the limitations of PPE
- Considerations for PPE controls in the manufacturing sector

Demonstrating competence in this area for the manufacturing sector should also include demonstration of the knowledge necessary to establish and maintain a PPE program suitable for the specific context of a given manufacturing organization. Familiarity with the PPE required at a particular jobsite or relevant to a specific process is vital for ensuring worker safety.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM2, HRCM6, HRCM8, THSS14
International Network of Safety & Health Professional Organisations: B6, B7, C16

107: EVALUATE PERSONAL PROTECTIVE EQUIPMENT CONTROLS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to PPE
- The importance of properly fitting PPE
- Different types of PPE controls

Apply and Analyze
Demonstrate ability to

- Select PPE appropriate to the hazards present at a jobsite
- Identify the necessary PPE appropriate for different hazards
- Perform PPE inspection and maintenance to manufacturer's standard
- Perform fitting of PPE
- Provide training in the adherence to PPE controls
- Conduct a training needs analysis
  - Provide recommendations for corrective action
- Implement and maintain a PPE control program

Evaluate and Create
Demonstrate ability to

- Evaluate existing PPE controls
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop appropriate PPE control programs
  - Evaluate PPE needs of different worksites
  - Evaluate training processes
  - Evaluate rules and procedures with consideration for factors affecting procedural compliance

108: EVALUATE ENGINEERING AND PHYSICAL BARRIER CONTROLS

An OHS professional should demonstrate a thorough understanding of the principles of engineering and barrier controls. Beyond the ongoing maintenance of controls, an OHS professional should demonstrate the ability to evaluate engineering and barrier controls that an organization has in place, identifying areas for improvement, as well as areas of excellence.

This includes engineering and barrier controls that impact the ability of workers to safely perform their tasks, for example:

- Types of barriers (machinery guarding, access control, separation, containment, work skills, etc.)
- Roles and limitations of barriers
- Control maintenance requirements
- Implications of engineering and barrier controls on operational processes

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM2, HRCM8
International Network of Safety & Health Professional Organisations: B6, B8, C16

108: EVALUATE ENGINEERING AND PHYSICAL BARRIER CONTROLS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to engineering and physical barrier controls
- Different types of engineering and physical barrier controls

Apply and Analyze
Demonstrate ability to

- Communicate results or recommendations from an engineering or physical barrier control assessment
- Implement recommendations for improvements to engineering or physical barrier controls
- Provide training in the adherence to engineering and physical barrier controls
- Conduct a training needs analysis
  - Provide recommendations for corrective action

Evaluate and Create
Demonstrate ability to

- Evaluate existing engineering and physical barrier controls
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop appropriate engineering and physical barrier control programs
  - Evaluate training processes
  - Evaluate rules and procedures with consideration for factors affecting procedural compliance

109: EVALUATE EMERGENCY RESPONSE PROCEDURES

All organizations face risks due to emergencies. Adequate emergency response procedures are essential to protecting workers and workplaces. Emergency preparedness can take many forms, and an OHS professional should demonstrate their proficiency with addressing the risks and hazards in a variety of workplace contexts. Contextual variables include:

- Site location (e.g., flood risk, isolation in northern regions, worker isolation in multi-location organizations, etc.)
- Risks due to production processes
- Response time for emergency services
- Pandemic situations

In order to act as an effective resource, the OHS professional should demonstrate a thorough understanding of, and ability to perform in, all aspects of emergency preparedness. These include:

- Liaising with external agencies in the event of an emergency
- Evaluating emergency detection and mitigation methods
- Development of emergency preparedness plans and arrangements, including emergency recovery plans
- Development of and implementation of preparedness plans, including drills

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM2, HRCM9
International Network of Safety & Health Professional Organisations: B10, C16

109: EVALUATE EMERGENCY RESPONSE PROCEDURES

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to emergency response
- Different types of emergency events
- Appropriate responses to different emergency events

Apply and Analyze
Demonstrate ability to

- Manage emergency preparation drills
  - Coordination of drills
  - Reporting relevant information
- Provide training in the adherence to emergency response procedures
- Conduct a training needs analysis
  - Provide recommendations for corrective action

Evaluate and Create
Demonstrate ability to

- Evaluate existing emergency response procedures
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop new emergency response procedures or adapt existing procedures in response to a change in workplace context
  - Evaluate training processes
  - Evaluate rules and procedures with consideration for factors affecting procedural compliance

110: ASSESS NEW AND EMERGING RISKS

The manufacturing sector is continuously developing and adopting new technologies and processes, introducing new risks to workplaces. OHS professionals should demonstrate the ability to proactively scan the environment and their own organization for new or emerging risks and assess their impact with respect to health and safety. Changes may result from increased business demands, as well as developments in legislative or industry standards. Horizon scanning should extend to the development of reports and recommendations for proposed operational changes or improvements.

In order to act as an effective resource in a workplace, OHS professionals should be able to assess these new and emerging risks proactively.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM9, THSS13
International Network of Safety & Health Professional Organisations: B10
Institute for Occupational Safety and Health: TC2

110: ASSESS NEW AND EMERGING RISKS

Understand and Remember
Demonstrate understanding of

- Catastrophic risks (risks with the potential to result in widespread damage, injury, or loss of life)
- Emerging risks (risks with growing trends and potentially uncertain outcomes or effects)
- Risks involving less serious non-monetary losses (risks resulting in incidents where the magnitude of harm may be poorly reflected in WorkSafeBC claim costs)
- Invisible risks (risks that are not fully revealed through detection or reporting)
- Slow-acting harms (risks where there can be many years between the initial exposure to a hazard and the manifestation of negative effects)
- Risks involving conscious opponents (risks introduced by people deliberately seeking to avoid regulatory measures)

Apply and Analyze
Demonstrate ability to

- Research and gather information from appropriate sources
- Assess new and emerging risk in the context of a specific organization
  - Identify the risk
  - Locate appropriate sources of information
  - Identify and communicate levels of hazard and risk
  - Provide recommendations

Evaluate and Create
Demonstrate ability to

- Evaluate the effectiveness of organizational preparedness programs
  - Identify opportunities for improvement
  - Identify areas of excellence
- Assess and evaluate levels of hazard and risk (SWOT analysis and recommendations)
- Develop a systematic program for evaluating new and emerging risks
- Provide awareness training on new and emerging risks

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being **2**

Hazard and Risk Mitigation

Incident Management

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas


2

2 Psychological Health and Well-Being

Psychological health and well-being is an important part of a healthy, safe, and productive organization. A competent OHS professional should be aware of the challenges faced by employers with regard to creating a safe and psychologically healthy work environment. In addition to being aware of the challenges, OHS professionals should understand the various factors that influence worker well-being, ranging from workplace attitudes and power dynamics to cultural and individual differences.

201 Demonstrate
Understanding of the Standard for Psychological Health and Safety in the Workplace

202 Demonstrate
Understanding of workplace factors that influence worker well-being

203 Demonstrate
Understanding of the needs of vulnerable workers

204 Communicate
And apply strategies and practices to improve psychological health and safety in the workplace

205 Demonstrate
Ability to respond to OHS-relevant psychology scenarios

206 Evaluate
Psychological hazard controls

207 Implement
Strategies and practices to improve organizational culture and climate

201: DEMONSTRATE UNDERSTANDING OF THE STANDARD FOR PSYCHOLOGICAL HEALTH AND SAFETY IN THE WORKPLACE

The Standard for Psychological Health and Safety in the Workplace was developed by the Canadian Standards Association (CSA) and is globally recognized as one of the highest-quality standards related to workplace well-being. An OHS professional should demonstrate a thorough understanding of and familiarity with the Standard and related resources. While there are too many aspects of psychological health and safety for (most) OHS professionals to be fully proficient experts, the Standard enables organizations to develop practices and policies in a logical and coherent manner, supporting the improvement of overall OHS performance of an organization.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM5, THSS6
International Network of Safety & Health Professional Organisations: E24
Institute for Occupational Safety and Health: 4.4

201: DEMONSTRATE UNDERSTANDING OF THE STANDARD FOR PSYCHOLOGICAL HEALTH AND SAFETY IN THE WORKPLACE

Understand and Remember
Demonstrate understanding of

- The Standard for Psychological Health and Safety in the Workplace
  - Content
  - Purpose
  - Tools and supplementary materials

Apply and Analyze
Demonstrate ability to

- Apply the Guarding Minds at Work survey
  - Provide interpretation of results
  - Provide recommendations for improvement
  - Identify areas of excellence
- Provide training in workplace policies and procedures regarding psychological well-being

Evaluate and Create
Demonstrate ability to

- Implement a program of psychological health and safety according to the Standard
- Conduct an audit according to the specifications of the Standard
- Develop new procedures or adapt existing procedures in response to a change in workplace context
  - Evaluate training processes
  - Assess rules and procedures with consideration for factors affecting procedural compliance

202: DEMONSTRATE UNDERSTANDING OF WORKPLACE FACTORS THAT INFLUENCE WORKER WELL-BEING

Ensuring employee well-being requires giving consideration to both the physical and psychological well-being of workers. Psychological well-being represents the "second-half" of the worker, beyond the physical well-being, which has historically been the concern of occupational health and safety. In order to ensure that all aspects of worker health and safety are considered, an OHS professional should demonstrate a thorough understanding of the following aspects of worker well-being:

- Chronic and cumulative impacts
- Multifactorial nature of health determinants
- Work-related impacts on health
- Concepts of "healthy work" and "wellness"
- Models of causation of fatigue and stress
- Mental illness in the workplace

Understanding the interaction between physical and mental well-being means that an OHS professional is able to act as an effective resource in their workplace, addressing the full spectrum of worker occupational health and safety.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRIA1, HRCM4, THSS5,THSS7
International Network of Safety & Health Professional Organisations: A1, E22
Institute for Occupational Safety and Health: TC4, CC6

202: DEMONSTRATE UNDERSTANDING OF WORKPLACE FACTORS THAT INFLUENCE WORKER WELL-BEING

Understand and Remember *Demonstrate understanding of*	• Bullying and harassment legislation
	• Factors influencing work well-being
	  ◦ Psychosocial factors
	  ◦ Biopsychosocial models
	• Differences between mental health and mental illness
	• Models of fatigue and stress

Apply and Analyze *Demonstrate ability to*	• Communicate ideas and strategies to improve worker well-being • Recognize impacts of worker well-being on organizational performance
Evaluate and Create *Demonstrate ability to*	• Use tools for assessing worker well-being ◦ Interpret and communicate results • Develop strategies to improve worker well-being

203: DEMONSTRATE UNDERSTANDING OF THE NEEDS OF VULNERABLE WORKERS

Vulnerable workers are those who are at a disadvantage in the workplace. This disadvantage may be due to a physical or mental disability, or it may be due to power dynamics in a workplace. Examples include:

- Workers with a supervisor or employer who may not show sufficient regard for safety
- Workers with a disability (visible or invisible)
- Workers of differing backgrounds
- Young or new workers

Different contexts may make a worker vulnerable in one situation who may not be vulnerable in another. By recognizing vulnerable workers, the OHS professional is able to ensure worker safety through intervention, training, or the identification of risks and hazards that affect certain groups of workers more than others. In order to act as an effective resource in their workplace, the OHS professional should be able to identify vulnerable workers and the additional controls which may be necessary to mitigate the worker's risk. This includes adjustments that can be made in the workplace to accommodate workers with disabilities.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM4
International Network of Safety & Health Professional Organisations: E24
Institute for Occupational Safety and Health: TC4

203: DEMONSTRATE UNDERSTANDING OF THE NEEDS OF VULNERABLE WORKERS

Understand and Remember
Demonstrate understanding of

- Factors that create vulnerability and protect vulnerable workers:
  - Legislated protected statuses and human rights
  - Diversity and inclusion
  - Disability
  - Power dynamics
    - Impacts of race, ethnicity, contract-worker status, etc.
  - Nature of the employment
    - Susceptible to automation, lack of fulfillment, lack of control or autonomy
  - Social well-being
    - Isolated working, lack of pride in work (Social Identity Theory)

Apply and Analyze
Demonstrate ability to

- Identify who in a workplace is most vulnerable to harm
- Provide recommendations for improvement
- Conduct training or needs analysis

Evaluate and Create
Demonstrate ability to

- Evaluate procedures for the protection of vulnerable workers which an organization has in place
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop new procedures or adapt existing procedures in response to a change in workplace context
- Provide training

204: COMMUNICATE AND APPLY STRATEGIES AND PRACTICES TO IMPROVE PSYCHOLOGICAL HEALTH AND SAFETY IN THE WORKPLACE

An OHS professional is often expected to participate in, or oversee, OHS management systems that promote and protect overall worker well-being. This may include communication of strategies for the application of tools and practices to both the workers and leaders in an organization. Demonstrating strong communication performance in this area, which is often new to employers and employees alike, enables the OHS professional to be a trusted resource and to ensure overall worker well-being.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM6, HSM7

204: COMMUNICATE AND APPLY STRATEGIES AND PRACTICES TO IMPROVE PSYCHOLOGICAL HEALTH AND SAFETY IN THE WORKPLACE

Understand and Remember
Demonstrate understanding of

- Key concepts around psychological health and safety in the workplace:
  - Importance of and use of appropriate language, such as:
    - Person-first or inclusive language
      - "Died by suicide" vs "Committed suicide"
    - Accident vs Incident
  - Stigma reduction and education
  - How to relate the content of the Standard for Psychological Health and Safety in the Workplace to a real-world context

Apply and Analyze
Demonstrate ability to

- Apply existing tools and strategies for improvement
  - Guarding Minds at Work
- Conduct workplace needs assessments
  - Interpret results of existing measurement practices
- Provide toolbox talks or other resources to introduce tools and concepts, reduce stigma, and promote healthy practices

Evaluate and Create
Demonstrate ability to

- Evaluate existing policies and procedures for implementing a strategy for the improvement of psychological health and safety in the workplace
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop policies and procedures for implementing a strategy for the improvement of psychological health and safety in the workplace

205: DEMONSTRATE ABILITY TO RESPOND TO OHS-RELEVANT PSYCHOLOGY SCENARIOS

The OHS professional is often involved in scenarios which have the potential to be a source of conflict and high-stress. These scenarios include injuries, near-misses, or even workplace deaths. In order to act as an effective resource in these scenarios, an OHS professional should demonstrate a thorough understanding of the following concepts:

- Psychobiology (structure and function of the brain and nervous systems, role of endocrine systems in response)
- Cognitive psychology (situation awareness, memory, cognitive biases in decision making)
- Behavioural psychology (learning, conditioning, motivation)
- Communication
- Fatigue and stress

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: THSS8
International Network of Safety & Health Professional Organisations: E23

205: DEMONSTRATE ABILITY TO RESPOND TO OHS-RELEVANT PSYCHOLOGY SCENARIOS

Understand and Remember
Demonstrate understanding of

- The psychological impact of traumatic events on individuals from different perspectives:
  - Psychobiology (structure and function of the brain and nervous systems, role of endocrine systems in response)
  - Cognitive psychology (situation awareness, memory, cognitive biases in decision-making)
  - Behavioural psychology (learning, conditioning, motivation)

Apply and Analyze
Demonstrate ability to

- Communicate effectively in non-traumatic scenarios
- Respond appropriately to non-traumatic scenarios
  - Ask, listen, refer, follow-up
  - Make an appropriate referral to internal or external resources
- Conduct an incident review
  - Initiate a debriefing process
    - Ask, listen, refer, follow-up
- Conduct a training needs analysis
  - Provide recommendations for corrective action

Evaluate and Create
Demonstrate ability to

- Respond appropriately to traumatic scenarios
- Communicate effectively in traumatic scenarios
- Evaluate traumatic-incident response procedures which an organization has in place
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop new traumatic-incident response procedures or adapt existing procedures in response to a change in workplace context
  - Evaluate training processes
  - Assess rules and procedures with consideration for factors affecting procedural compliance

206: EVALUATE PSYCHOLOGICAL HAZARD CONTROLS

In the context of OHS, psychological hazards are those events or circumstances which stem from the workplace and have the potential to negatively impact worker health and well-being in a non-physical manner. Psychological safety requires addressing the root causes of psychological hazards in the workplace in order to avert injury or danger to the degree that it is within the influence and responsibility of the employer.

In order to act as an effective resource in this context, the OHS professional must demonstrate an understanding of the tools and resources available to mitigate psychological health risks and to be able to evaluate the controls in place.

Prerequisites	
References in other Frameworks	Institute for Occupational Safety and Health: 2.8

206: EVALUATE PSYCHOLOGICAL HAZARD CONTROLS

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to psychological health and safety • Right to dignity • Bullying and harassment • Types of psychological hazards

Apply and Analyze *Demonstrate ability to*	• Identify psychological hazards in the workplace
	• Identify controls appropriate for hazards
	• Implement appropriate controls
	  ◦ Utilize Guarding Minds at Work
	  ◦ Utilize the Standard for Psychological Health and Safety in the Workplace

Evaluate and Create *Demonstrate ability to*	• Evaluate the results of a psychological health and safety quality improvement process
	  ◦ Identify areas of excellence
	  ◦ Identify opportunities for improvement
	• Develop a psychological health and safety quality improvement process

207: IMPLEMENT STRATEGIES AND PRACTICES TO IMPROVE ORGANIZATIONAL CULTURE AND CLIMATE

OHS professionals are often required to be responsible for the complete workplace safety culture and climate. The safety culture of a workplace is the set of shared values and beliefs surrounding workplace safety. Safety climate refers to workers' perceptions of how safety is managed in their workplace through policies, practices, and procedures. Integrating these concepts with regular OHS processes requires an advanced understanding of organizational structures, the role of leadership in a workplace, and methods for improving workplace culture and climate that extend beyond health and safety.

In order to act as an effective resource in this area, the OHS professional must be able to work cross-functionally in the organization, in departments, and on projects that may not have a clear relationship to operational health and safety. An OHS professional should demonstrate this competency through a thorough understanding and ability to communicate the following concepts:

- The difference between workplace culture and safety culture
- Organizational structures and hierarchies
- The role of leadership in workplace culture and climate
- How policy is written, implemented, and monitored for compliance

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM5, HSM6, HSM7, MS2
International Network of Safety & Health Professional Organisations: C13
Institute for Occupational Safety and Health: TC4

207: IMPLEMENT STRATEGIES AND PRACTICES TO IMPROVE ORGANIZATIONAL CULTURE AND CLIMATE

Understand and Remember
Demonstrate understanding of

- The difference between workplace safety culture and safety climate
- Implications of legislation and regulation for workplace safety culture
- Concepts involved in the modification of safety culture, such as:
  - The relationship between employees and management
  - The role of leadership
- The importance of shared corporate values
- Trust within the workplace

Apply and Analyze
Demonstrate ability to

- Communicate concepts involved in the modification of safety culture
  - Communicate with workers
  - Communicate with leaders
- Communicate with unions (if applicable)
- Assess safety culture using existing tools
- Interpret and communicate results

Evaluate and Create
Demonstrate ability to

- Integrate organizational safety culture goals with existing business goals and strategy
- Evaluate the effectiveness of existing safety culture practices and strategies
- Develop action plans for modifying safety culture
- Develop safety culture quality improvement processes
  - Ongoing assessment
  - Training
  - Goals and action plans
- Develop policy and procedure documents

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation **3**

Incident Management

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas

3

3 Hazard and Risk Mitigation

The mitigation of hazards and risks is a primary aspect of all OHS professionals' work. The proactive work of identification and profiling as well as the ongoing work of routine inspection, monitoring, and reporting all tie into an organization's ability to effectively mitigate risk. In addition, an OHS professional working in the manufacturing sector should demonstrate understanding of and experience with manufacturing-specific risk and knowledge areas. It is important that the OHS professional understands the limits of their own knowledge and understands when it is necessary to bring in additional expertise.

301 Demonstrate
Understanding of the psychological aspects of worker safety

302 Demonstrate
Understanding of risk in the workplace

Prerequisites: 301

303 Identify
Risks and use risk profiling tools

Prerequisites: 302

304 Prioritize
Risks

Prerequisites: 303

305 Perform
Inspections

Prerequisites: 304

306 Develop
Risk assessment reports

Prerequisites: 305

307 Mitigate
Risks

308 Monitor
And develop ongoing risk reporting processes

Prerequisites: 307

309 Provide
Recommendations for corrective action with supporting rationale

310 Develop
Business continuity plans

301: DEMONSTRATE UNDERSTANDING OF THE PSYCHOLOGICAL ASPECTS OF WORKER SAFETY

Psychological hazards are a potential source of harm to workers in the same way as physical hazards. In order for a workplace to promote psychological health and safety, it is important to provide programs and resources that educate workers and leaders and provide avenues for support. This active work is necessary to prevent harm to worker psychological health. In order for an OHS professional to be an effective resource in this area, they should demonstrate a thorough understanding of the following:

- Legislative requirements and best practice standards regarding psychological health and safety
- Risk factors associated with psychological hazards in the workplace
- Workplace factors that impact psychological health and safety
- Impact of psychological health on worker overall health
- Impact of psychological health on organizational performance

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HRCM4

301: DEMONSTRATE UNDERSTANDING OF THE PSYCHOLOGICAL ASPECTS OF WORKER SAFETY

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to psychological health and safety
	• Types of psychological hazards in the workplace, such as:
	  ◦ Workload related stress
	  ◦ Fatigue
	  ◦ Bullying and harassment
	  ◦ Aggression
	  ◦ Violence at work
	• Workplace factors that impact worker health

Apply and Analyze *Demonstrate ability to*	• Communicate the:
	  ◦ Different types of psychological hazards in the workplace
	  ◦ Impact of psychological health on worker overall health
	  ◦ Impact of psychological health on organizational performance
	• Provide training to workers

Evaluate and Create *Demonstrate ability to*	• Evaluate the degree of understanding of an organization with respect to psychological health and safety
	  ◦ Identify areas of excellence
	  ◦ Identify opportunities for improvement
	• Develop training resources

302: DEMONSTRATE UNDERSTANDING OF RISK IN THE WORKPLACE

OHS professionals must possess foundational knowledge about workplace risks. In order for an OHS professional to act as an effective resource, they should demonstrate a thorough understanding of the following concepts:

- Difference between hazard and risk
- Risk as a multifaceted concept
- Prioritization of critical risk
- Qualitative and quantitative aspects of risk
- Principles of risk mitigation

In addition, an OHS professional working in the manufacturing sector should demonstrate understanding of and experience with manufacturing-specific risk and knowledge areas. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

Prerequisites	301
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRIA3 International Network of Safety & Health Professional Organisations: A4, B11

302: DEMONSTRATE UNDERSTANDING OF RISK IN THE WORKPLACE

Understand and Remember *Demonstrate understanding of*	• Difference between hazards and risks • Risk as a multi-faceted concept • Prioritization of critical risk • Qualitative and quantitative aspects of risk • Types of risk relevant to the sector (manufacturing, construction, retail, etc.)

Apply and Analyze *Demonstrate ability to*	• Effectively communicate about workplace risk
	• Provide training to workers, such as:
	  ◦ Toolbox talks
	  ◦ One-on-one training
	  ◦ Group training

Evaluate and Create *Demonstrate ability to*	• Evaluate worker and leadership understanding of risk in the workplace
	• Evaluate effects of organizational changes on risk levels
	• Develop training or education materials
	  ◦ Toolbox talks
	  ◦ Policy and procedures
	• Develop forecasts based on proposed changes
	  ◦ Evaluate effects of proposed changes on workers and business performance

303: IDENTIFY RISKS AND USE RISK PROFILING TOOLS

Risk identification and profiling require OHS professionals to understand the level and nature of risks and how they fit into the overall risk management and governance structure of the organization. OHS professionals should be able to systematically work to identify OHS risks, profile their severity, and make recommendations for how controls can be implemented through the organization. The process of risk identification and profiling must include regular review to identify any significant changes to risk profiles due to changes in the workplace context and should include plans to ensure that appropriate OHS resources are made available.

Prerequisites	302
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRIA4, HSM14 Institute for Occupational Safety and Health: TC2

303: IDENTIFY RISKS AND USE RISK PROFILING TOOLS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to the mitigation of risks in the workplace
- The purpose of a variety of safety techniques to identify hazards and assess risks, such as:
  - Event tree analysis
  - Fault tree analysis
  - Inspections and observations inventory
  - Job hazard analysis
  - Job safety analysis
  - Physical demands analysis
  - Task analyses

Apply and Analyze
Demonstrate ability to

- Use tools and techniques to identify hazards and assess risks, such as:
  - Event tree analysis
  - Fault tree analysis
  - Inspections and observations inventory
  - Job hazard analysis
  - Job safety analysis
  - Physical demands analysis
  - Task analyses
- Effectively communicate how the identified hazards and associated risks impact operational processes
- Use hazard monitoring equipment (e.g., noise, ventilation, chemicals, etc.)
  - Interpret and communicate the results of hazard monitoring

Evaluate and Create
Demonstrate ability to

- Evaluate the adequacy of an existing risk assessment and profiling plan
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop risk assessment and profiling procedures for new worksites or in response to changes in worksite context

304: PRIORITIZE RISKS

The OHS professional prioritizes risk and opportunities in OHS, based on the wider impact on the organization in terms of probability, scale, significance, impact and distribution. They are able to explain a range of factors that can influence the perceptions of risk. By using risk prioritization methods, they can inform action plans, risk control decisions and management strategies. They are able to create a business case to support proposed interventions. Competence entails the ability to use risk prioritization to develop complex risk control programmes and mitigation plans.

Prerequisites	303
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRIA5, HSM25, THSS9 Institute for Occupational Safety and Health: TC2

304: PRIORITIZE RISKS

Understand and Remember
Demonstrate understanding of

- Legislative and regulatory requirements for risk identification
- The purpose and application of tools and techniques for the prioritization of risks, such as:
  - ALARA/ALARP
  - Risk matrix
- Interpretation of statistical concepts:
  - Probability, likelihood
  - Quantitative and qualitative measurements

Apply and Analyze
Demonstrate ability to

- Use tools and techniques to prioritize hazards and risks for correction, such as:
  - "As low as reasonably achievable" principles (ALARA)
  - Risk matrices
- Effectively communicate how the identified hazards and associated risks impact operational processes
  - Correctly interpret risk prioritization metrics
- Provide corrective action recommendations based on risk reporting including:
  - Risk assessment and profiling
  - Predictive modelling
- Correctly interpret and apply procedures for risk (re)assessment

Evaluate and Create
Demonstrate ability to

- Evaluate the adequacy of existing risk prioritization and (re)assessment policies and procedures
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop action plans which align with business priorities for the minimization of risks
- Develop risk prioritization and reassessment policies and procedures

305: PERFORM INSPECTIONS

Effective inspections are an important incident prevention tool in a company's health and safety program. Properly trained inspectors in a systematic inspection program will help reduce incidents, near-misses, and property damage. Competence in this area is a key component of reducing the frequency and severity of incidents. In order to act as an effective resource in their workplace, OHS professionals should be able to conduct inspections from beginning to end, identifying:

- Unsafe processes, acts, and conditions
- Ineffective OHS risk controls and risk management systems
- Improvements to OHS risk control and management systems
- Limitations in performing inspections and when to seek additional expertise

Prerequisites	304
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM16

305: PERFORM INSPECTIONS

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to inspections in the workplace • Different types of inspections • Frequency of inspections • How corrective actions are identified and implemented • Requirements for maintaining inspection records • How inspection programs improve safety outcomes

Apply and Analyze *Demonstrate ability to*	• Perform inspections
	• Distinguish between hazards that could be a direct or indirect cause of an incident or near-miss
	• Complete inspection reports
	• Communicate inspection findings
	  ◦ Presentation
	  ◦ Written
	  ◦ Oral
	• Provide recommendations for corrective action
	• Monitor corrective action progress

Evaluate and Create *Demonstrate ability to*	• Evaluate the effectiveness of an existing inspection program
	  ◦ Identify areas of excellence
	  ◦ Identify opportunities for improvement
	• Develop a new inspection program or adapt in response to changes in the workplace context
	  ◦ Frequency
	  ◦ Inspection types
	  ◦ Compliance with legislation and best practice standards
	  ◦ Reporting and record keeping
	• Provide training for inspections

306: DEVELOP RISK ASSESSMENT REPORTS

OHS professionals are often responsible for providing ongoing and as-needed reporting on workplace risk. This may include formal reports regarding risk assessments, incident statistics, and project progress. In order to develop these types of reports, an OHS professional demonstrates the effective use of risk-related data (from both internal and external sources), tools for trend analysis, and workplace documentation regarding workplace risk. They must be able to use a range of qualitative and quantitative approaches to assess risk, depending on the type of reporting required.

Prerequisites	305
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM26, THSS9 International Network of Safety & Health Professional Organisations: C15, E25

306: DEVELOP RISK ASSESSMENT REPORTS

Understand and Remember
Demonstrate understanding of

- Appropriate and necessary information to include in risk assessment reporting
- Formal structure and method for report writing
- Where appropriate data can be located
  - Internal
  - External

Apply and Analyze
Demonstrate ability to

- Apply risk assessment tools
  - In response to changes in the workplace context
  - As part of an ongoing risk assessment process
- Collect relevant data for risk reporting
  - Internal sources
  - External sources

Evaluate and Create
Demonstrate ability to

- Write a risk assessment report
  - Follow formal reporting guidelines, if applicable
  - Identify opportunities for improvement
  - Identify areas of excellence
- Present a risk assessment report
  - Conveying information in an effective manner
  - Addressing questions or concerns

307 Hazard and Risk Mitigation

307: MITIGATE RISKS

OHS professionals develop mitigation strategies, including the proportionate allocation of resources to control risk adequately. By doing so, they build the resilience of the organization to manage current, emerging, and future risks. The OHS professional uses a range of resources to justify mitigation recommendations and overall business improvements to eradicate or reduce risk. They ensure risk controls are proportionate to the individual risk in terms of likelihood and severity. They can measure the value of outcomes as well as outputs and thereby demonstrate that the aims of the business case for intervention have been achieved.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM14
International Network of Safety & Health Professional Organisations: B11
Institute for Occupational Safety and Health: TC2

307: MITIGATE RISKS

Understand and Remember
Demonstrate understanding of

- Risk mitigation tools and techniques
- Risk mitigation methods appropriate to different types of hazards

Apply and Analyze
Demonstrate ability to

- Implement existing risk mitigation work plans
- Provide worker training in safe work practices
- Provide recommendations for improvement of operational practices

Evaluate and Create
Demonstrate ability to

- Evaluate existing risk mitigation policies and procedures
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop new risk mitigation strategies or adapt in response to changes in the workplace context including:
  - Project work plans
  - Control-specific programs

308: MONITOR AND DEVELOP ONGOING RISK REPORTING PROCESSES

In order for an organization to have a clear view of its OHS performance, it is necessary to develop an OHS risk reporting system that provides detailed, regular reports. Understanding the impact of OHS on a business requires an OHS reporting system that is in alignment with the organization's structure and operations. OHS professionals are often responsible for the development and ongoing maintenance of these reporting systems. In order to act as an effective resource for their workplace, an OHS professional should be able to use the risk reporting system to escalate emerging risks, provide ongoing information regarding OHS performance, and provide recommendations for improvements based on systematic data analysis.

Prerequisites	307
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM15 Institute for Occupational Safety and Health: TC2

308: MONITOR AND DEVELOP ONGOING RISK REPORTING PROCESSES

Understand and Remember
Demonstrate understanding of

- Principles of performance monitoring and reporting
- How OHS performance impacts organizational performance
- How new risks are introduced to the workplace
- How data analysis is performed and how it improves OHS performance

Apply and Analyze
Demonstrate ability to

- Maintain an existing risk reporting system
- Communicate effectively regarding changes to workplace risk
  - How the change impacts workers
  - How the change impacts the organization

Evaluate and Create
Demonstrate ability to

- Evaluate existing risk reporting processes
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop risk reporting policies and procedures
  - Assess reporting needs; develop an implementation work plan; develop documentation of processes
  - Assess rules and procedures with consideration for factors affecting procedural compliance
  - Integrate reporting processes with existing organization structure

309: PROVIDE RECOMMENDATIONS FOR CORRECTIVE ACTION WITH SUPPORTING RATIONALE

An OHS professional should be able to evaluate risk assessment reports, incident investigations, routine inspections, or reports regarding OHS performance and develop corrective action recommendations with supporting rationale. Utilizing OHS science and engineering principles, the OHS professional should be able to design a plan for the implementation of corrective action plans, and communicate the plan to relevant stakeholders in an appropriate manner.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM25
International Network of Safety & Health Professional Organisations: C15, E26

309: PROVIDE RECOMMENDATIONS FOR CORRECTIVE ACTION WITH SUPPORTING RATIONALE

Understand and Remember
Demonstrate understanding of

- Where and how to locate technical standards
- Basic OHS science and engineering to understand the damage and control mechanisms of hazards covered
  - Types of machinery and processes and their functions and hazards
  - Principles of hazard monitoring equipment (e.g., noise, air quality, chemicals)
  - Standards relating to "state of the art and best available technology"
  - How to recognize limitations of knowledge and when to consult specialists

Apply and Analyze
Demonstrate ability to

- Read and apply technical standards
- Research and communicate available technologies and controls
- Communicate effectively regarding:
  - OHS performance metrics
  - Changes in best practice standards

Evaluate and Create
Demonstrate ability to

- Evaluate the effectiveness of corrective action follow-up
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop action plans for implementing corrective actions

310: DEVELOP BUSINESS CONTINUITY PLANS

Business continuity planning is the process of ensuring that a company is robust regarding its ability to respond to and recover from potential threats. This plan ensures that workers and organizational resources are protected and able to respond appropriately in the event of a disaster. It is important to be able to understand and facilitate the integration of occupational health and safety risk management into the wider OHS management systems. OHS professionals can support the delivery of the organization's well-being agenda through collaboration with others to develop business continuity plans which support the ongoing process of developing workplace safety.

In order to act as an effective resource to the organization, an OHS professional should be familiar with aspects of business continuity plans such as:

- Emergency preparedness
- Knowledge management in the face of worker turnover
- Training and education of new or newly promoted workers, managers, and executives
- Implementation of and evaluation of emergency response plans

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM25

310: DEVELOP BUSINESS CONTINUITY PLANS

Understand and Remember *Demonstrate understanding of*	• Different types of business continuity plans
	  ◦ Succession planning
	• The requirements and goals of business continuity plans, such as:
	  ◦ Communications system integrity
	  ◦ Document management and recovery
	  ◦ Records keeping

Apply and Analyze *Demonstrate ability to*	• Create an action plan according to the specification of an existing business continuity plan • Follow business continuity plan processes • Provide worker training • Manage emergency preparation drills

Evaluate and Create *Demonstrate ability to*	• Evaluate the adequacy of an existing business continuity plan
	  ◦ Identify areas of excellence
	  ◦ Identify opportunities for improvement
	• Develop a new business continuity plan or adapt in response to changes in the workplace context

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management **4**

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas


4

4 Incident Management

An OHS professional should be competent in managing incidents, including near-misses. This is necessary to ensure that an organization is able to learn from all incidents for the future protection of its workers, and to ensure that effective incident management procedures are followed at all times. Competency in this area is necessary to protect both workers and organizations in cases of legal liability.

401 Demonstrate
Understanding of the legal implications of incident management

402 Identify
The appropriate principles and actions associated with incident management

403 Report
Incidents

404 Perform
Investigative interviews

405 Conduct
An incident cost analysis

406 Conduct
Incident investigations and provide recommendations for corrective action

407 Evaluate
OHS incident management procedures

401 Incident Management

401: DEMONSTRATE UNDERSTANDING OF THE LEGAL IMPLICATIONS OF INCIDENT MANAGEMENT

The OHS professional must be able to identify the full range of documentary evidence that would support a legal defence, including documentation that may not be directly OHS-related (e.g., maintenance records). In order to substantiate claims regarding OHS performance and activities, the OHS professional should be able to demonstrate their own competency and expertise in the field of OHS, including citing specific training, education, and professional development that supports the professional's claim to expertise. Depending on their level of responsibility within an organization, the OHS professional may need to be able to work collaboratively with the legal teams tasked to build a defence.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM9, HSM10, HSM17
Institute for Occupational Safety and Health: TC3

401: DEMONSTRATE UNDERSTANDING OF THE LEGAL IMPLICATIONS OF INCIDENT MANAGEMENT

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to workplace incidents • Regulatory requirements regarding workplace incidents • Evidence and the chain of custody for evidence • Privacy and human rights laws • Limitations and when to seek specialist expertise

Apply and Analyze *Demonstrate ability to*	• Communicate effectively regarding incident investigation responsibilities
	  ◦ To workers
	  ◦ To managers
	• Provide training
	• Communicate credibly with emergency and regulatory officers
	• Correctly apply evidence and chain of custody procedures with appropriate record keeping

Evaluate and Create *Demonstrate ability to*	• Evaluate existing procedures for incident response management
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop new procedures or adapt existing procedures in response to a change in workplace context to ensure compliance with legislation

402 Incident Management

402: IDENTIFY THE APPROPRIATE PRINCIPLES AND ACTIONS ASSOCIATED WITH INCIDENT MANAGEMENT

The OHS professional should be able to apply different procedures to deal with incidents of differing severity. Procedures will include dealing with casualties, dealing with worker shock, preserving the scene for investigation, implementing incident reporting processes, appointment of legal advice and management of public relations. The OHS professional should be able to identify stakeholders and engage them appropriately in the investigation.

Prerequisites	
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRCM10

402: IDENTIFY THE APPROPRIATE PRINCIPLES AND ACTIONS ASSOCIATED WITH INCIDENT MANAGEMENT

Understand and Remember *Demonstrate understanding of*	• How and why incident severity changes response procedures • Requirements and processes to preserve incident scenes for investigation • Roles and responsibilities • Chains of communication

Apply and Analyze *Demonstrate ability to*	• Perform incident management duties according to an existing incident management procedure
	  ◦ Preserve the incident scene
	  ◦ Keep appropriate records
	  ◦ Ensure proper follow-up

Evaluate and Create *Demonstrate ability to*	• Evaluate existing procedures for incident response management
	• Develop incident management procedures or adapt existing procedures in response to a change in workplace context
	  ◦ Roles and responsibilities
	  ◦ Chains of communication
	  ◦ Follow-up processes for corrective action

403 Incident Management

403: REPORT INCIDENTS

The OHS professional should be able to apply organizational standards to reporting on OHS incidents, including near-misses. In the absence of organization standards, OHS professionals should be able to apply knowledge of relevant professional and legal standards to write reports without organizational guidance. This includes the ability to appropriately categorize incidents, assess their severity, and their implications within a specific organizational context. The OHS professional must also be able to provide recommendations for improvement which are commensurate to the risk profile of the organization and appropriate to the organization's context.

Prerequisites	
References in other Frameworks	Institute for Occupational Safety and Health: TC3

Elements of Competence

403: REPORT INCIDENTS

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to incident reporting • How to write incident reports in accordance with pre-specified workplace processes
Apply and Analyze *Demonstrate ability to*	• Write incident reports without pre-specified workplace processes, in accordance with relevant professional and legal standards

Evaluate and Create *Demonstrate ability to*	• Evaluate existing procedures for incident reporting
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop incident reporting procedures or adapt existing procedures in response to a change in workplace context

404: PERFORM INVESTIGATIVE INTERVIEWS

Interviews are a key component of incident investigations, and they must be conducted at a high standard that includes meeting legislated requirements around privacy laws and facilitating continual improvement. Interviewing in the OHS context is a key step in collecting information during incident investigations to help identify the direct and indirect causes and enable effective prevention strategies to be implemented. Interviewers should be familiar with the principles of interview practice and able to apply these skills in all types of scenarios.

In order to act as an effective resource to their organization, an OHS professional should be able to apply interviewing skills in OHS matters, such as:

- Incident investigations
- Occupational Health and Safety Management System audits

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM17
Institute for Occupational Safety and Health: TC3

404: PERFORM INVESTIGATIVE INTERVIEWS

Understand and Remember *Demonstrate understanding of*	• The purpose of interviews in the OHS context
	• Different types of interviews
	• Principles of interview practice, such as:
	  ◦ "The Reid interview technique" process
	  ◦ How to ask questions in an open, inclusive manner

Apply and Analyze *Demonstrate ability to*	• Conduct interviews for different purposes, such as:
	  ◦ Incident investigations
	  ◦ OHS audits
	• Conduct different types of interviews
	  ◦ Behavioural interview
	  ◦ Cognitive interview
	• Develop a written report communicating findings appropriate to the purpose of the interviews
	• Provide training for internal interviewing

Evaluate and Create *Demonstrate ability to*	• Evaluate existing interviewing procedures
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop interviewing procedures or adapt in response to a change in the workplace context
	• Develop training resources for internal interview training

405: CONDUCT AN INCIDENT COST ANALYSIS

As part of incident investigation, OHS professionals must undertake a cost analysis to understand the impact of the incident on the business. The cost analysis should include both short-term and long-term costs, as well as different types of costs, including:

- Impacts to worker health and well-being
- Financial costs
- Reputational costs

In order to act as an effective resource to their organization, an OHS professional should be able to communicate effectively regarding the different types of costs stemming from incidents, and to incorporate incident cost forecasting in the prioritization of risk-control prioritization processes.

Prerequisites	
References in other Frameworks	Institute for Occupational Safety and Health: TC3

405: CONDUCT AN INCIDENT COST ANALYSIS

Understand and Remember
Demonstrate understanding of

- Different types of costs associated with workplace incidents:
  - Worker health
  - Financial costs such as:
    - Reparations, fines, and penalties
    - Repair
    - Insurance rate changes
    - Lost production
    - Inventory and product losses
  - Reputational or brand damage
- Methods and tools for conducting incident cost analysis

Apply and Analyze
Demonstrate ability to

- Conduct an incident cost analysis using existing processes and tools
  - Identify short-term and long-term costs
  - Identify different types of costs
- Write an incident cost report in accordance with pre-specified procedures

Evaluate and Create
Demonstrate ability to

- Write an incident cost analysis in the absence of existing processes
- Communicate cost analysis information to all employee levels, including senior management
- Evaluate incident cost reports processes
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop incident cost analysis processes

406: CONDUCT INCIDENT INVESTIGATIONS AND PROVIDE RECOMMENDATIONS FOR CORRECTIVE ACTION

In order to act as an effective resource for their organization, an OHS professional should be able to lead incident investigations from beginning to end:

- Preliminary investigation
    - In the event of an incident, an employer must ensure that a preliminary investigation is carried out to identify any unsafe acts, processes, or conditions that must be addressed prior to work resuming. The OHS professional should be able to work efficiently and accurately to ensure that this obligation is met.
- Interim corrective actions
    - The preliminary report developed by the OHS professional must contain interim corrective actions, if applicable, which can be implemented while the full investigation is being conducted.
- Full investigation
    - The OHS professional should be able to determine an incident's root cause(s) and contributing factors through careful analysis of collected information and evidence.
- Final corrective actions
    - The final report developed by the OHS professional must clarify the circumstances leading to the incident, what corrective actions are necessary, and a plan for the implementation of corrective actions.

Prerequisites	
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM17

406: CONDUCT INCIDENT INVESTIGATIONS AND PROVIDE RECOMMENDATIONS FOR CORRECTIVE ACTION

Understand and Remember
Demonstrate understanding of

- The four stages of investigation
- Different sources of evidence used in incident investigations
- Roles and responsibilities

Apply and Analyze
Demonstrate ability to

- Conduct an incident investigation
- Collect evidence through different mediums:
  - Photography
  - Video or video surveillance
  - Sound recording
  - Investigative interviews
  - Monitoring equipment and records
- Store evidence and ensure proper chain of ownership
- Communicate effectively
  - Report writing
  - Results presentation
  - Methodology defence
- Identify and apply appropriate models of incident causation
- Provide recommendations for corrective actions

Evaluate and Create
Demonstrate ability to

- Evaluate incident investigation procedures
  - Identify opportunities for improvement
  - Identify areas of excellence
- Evaluate effectiveness of corrective action(s) and risk mitigation strategy
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop implementation plans based on incident report recommendations
- Develop incident investigation procedures or adapt in response to a change in the workplace context

407: EVALUATE OHS INCIDENT MANAGEMENT PROCEDURES

OHS professionals are usually involved in workplace incident management procedures. Incident management procedures enable organizations to respond effectively and consistently to OHS incidents in a way that meets their legal requirements and supports workers. In order to act as an effective resource in this area, an OHS professional should demonstrate a thorough understanding of the legislation, regulations, and standards that pertain to incident management.

In addition to understanding important concepts, an OHS professional should be able to work effectively in potentially high-responsibility, time-sensitive scenarios.

Prerequisites	
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRCM10

Elements of Competence

407: EVALUATE OHS INCIDENT MANAGEMENT PROCEDURES

Understand and Remember *Demonstrate understanding of*	• Legislative and regulatory requirements regarding organizational first aid and access to emergency services • Workers' rights legislation related to workplace incidents
Apply and Analyze *Demonstrate ability to*	• Identify which measures are required for the workplace based on evaluations of emergency response and exposure control plans • Assess the risk rating on potential emergency scenarios and access to emergency services • Implement and manage services and programs • Collect data for use in trending analyses
Evaluate and Create *Demonstrate ability to*	• Evaluate existing incident management procedures • Develop new incident management procedures or adapt procedures in response to change in context

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management

OHS Management Systems **5**

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas


5

5 Occupational Health and Safety Management Systems

An OHS professional in manufacturing must be competent in understanding and managing different aspects of Occupational Health and Safety Management Systems (OHSMS). An OHSMS is a crucial tool in the growth of any organization's OHS practices because it provides the mechanism for evaluating OHS performance and ensuring the quality and continual improvement of an OHS program. An effective OHSMS encompasses health and safety policies, systems, standards, and records, and requires incorporating health and safety processes into other business processes.

501 Demonstrate
Understanding of Occupational Health and Safety Management Systems

502 Demonstrate
Understanding of quality management processes and their integration with OHS

Prerequisites: 501

503 Use
And maintain an OHS Document Management System

Prerequisites: 502

504 Monitor
Occupational health and safety performance

Prerequisites: 503

505 Perform
OHS management system audits

506 Develop
Health and safety policy

507 Administer
An OHS management system

508 Provide
OHS training and instruction

501: DEMONSTRATE UNDERSTANDING OF OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS

OHS professionals work collaboratively with stakeholders to build an organizational structure, plan activities, assign responsibilities, develop safe working practices, and implement OHS management system procedures. The development and application of a formal OHS management system (OHSMS) is widely recognized as one of the most effective ways to organize these activities and improve health and safety outcomes within an organization. In order to be an effective resource, the OHS professional should demonstrate a thorough understanding of the following concepts:

- OHS management systems (types, typical structure and elements, limitations)
- OHS management system standards
- Processes for implementing a critical control management program
- Interaction of the OHSMS with other systems, environment, and people

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM1, HSM2, HSM20
International Network of Safety & Health Professional Organisations: C12, E21
Institute for Occupational Safety and Health: TC1

501: DEMONSTRATE UNDERSTANDING OF OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS

Understand and Remember
Demonstrate understanding of

- Canadian Standards Association (CSA) Z1000-06: Occupational Health and Safety Management
- International Organization for Standards (ISO) 2018: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEMS
- Certificate of Recognition (COR) programs
- The purpose and goals of OHSMS audits
- Principles related to Occupational Health and Safety Management Systems:
  - OHS roles and responsibilities
  - The application of a plan-do-check-act framework
  - System safety
  - Systems of work, work procedures, and instructions
  - Theories of safety management, including new and emerging theories and insights

Apply and Analyze
Demonstrate ability to

- Follow and maintain existing OHSMS procedures
- Communicate the requirements of existing OHSMS processes
- Communicate the importance and value of OHSMS
- Provide training in the application of OHSMS processes

Evaluate and Create
Demonstrate ability to

- Evaluate existing OHSMS policies and procedures
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop OHSMS procedures and policies or adapt in response to a change in the workplace context

502: DEMONSTRATE UNDERSTANDING OF QUALITY MANAGEMENT PROCESSES AND THEIR INTEGRATION WITH OHS

In order to facilitate the development or maintenance of an effective OHS Management System, the OHS professional should be competent in the use of quality management processes and their application. A quality management process is a highly intentional system designed to provide consistent results, improve efficiency, and continuous improvement. An effective quality management process requires a strong understanding of an organization's interrelated processes and goals. In manufacturing, the OHS professional may need to demonstrate an understanding of the Lean methodology. Lean is a methodology to reduce waste in a manufacturing system without sacrificing productivity and is a common language that will streamline communication between OHS professionals and business managers and executives.

Prerequisites	501
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM3 International Network of Safety & Health Professional Organisations: C12 Institute for Occupational Safety and Health: TC1

502: DEMONSTRATE UNDERSTANDING OF QUALITY MANAGEMENT PROCESSES AND THEIR INTEGRATION WITH OHS

Understand and Remember *Demonstrate understanding of*	• Quality management systems and tools • How to review workplace systems and their interaction • How the OHSMS interacts with other workplace systems • Relationships between safety management systems to environmental, quality, human interaction, and business management approaches
Apply and Analyze *Demonstrate ability to*	• Follow and maintain existing quality management processes • Identify opportunities to integrate OHS systems with existing quality management systems

Evaluate and Create *Demonstrate ability to*	• Evaluate the performance of existing quality management processes
	  ◦ Identify areas of excellence
	  ◦ Identify opportunities for improvement
	• Develop a new or adapt an existing quality management system in response to changes in the workplace context
	• Present project proposals that identify the business case for quality improvement processes in OHS

503: USE AND MAINTAIN AN OHS DOCUMENT MANAGEMENT SYSTEM

All OHS Management System standards require that relevant documentation of OHS policies, procedures, and processes be maintained in a document management system. In order for an OHS professional to act as an effective resource for an organization, they must demonstrate the ability to competently review documentation, develop documentation, provide recommendations for changes that are appropriate to the organization's context, and maintain the document management system. Depending on the document management system in place, this may require a variety of computer-use or file-management competencies, or both. In addition to understanding how to store documents, the OHS professional should demonstrate familiarity with relevant legislation dictating what types of documentation are required, in addition to best practice OHS standards, such as CSA or ISO standards.

An OHS professional should be familiar with and competent in the use of systems for managing and reporting OHS information. Competently navigating OHS information systems includes:

- Locating sources of OHS information (internal and external)
- Understanding workplace requirements for OHS information
- Meeting external agencies' reporting requirements
- Meeting documentation requirements (organizational and external)
- Using and implementing systems for managing OHS information
- Collecting data through research, investigation, interview, and observation

Prerequisites	502
References in other Frameworks	Board of Canadian Registered Safety Professionals: HSM24, HSM26 International Network of Safety & Health Professional Organisations: C17 Institute for Occupational Safety and Health: CC6

503: USE AND MAINTAIN AN OHS DOCUMENT MANAGEMENT SYSTEM

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to OHS documentation, as well as:
  - Workplace requirements for OHS documentation
  - External agencies' requirements for documentation
- Sources of OHS information (internal and external)
- Systems for managing OHS information
- Data collection by research, investigation, interview, and observation

Apply and Analyze
Demonstrate ability to

- Review documentation
- Use common computer software and tools
- Adhere to file management processes
- Adhere to document collection processes
- Review changes in legislation or best practice standards and provide recommendations for improvement to existing systems

Evaluate and Create
Demonstrate ability to

- Evaluate an OHSMS document management system
  - Identify opportunities for improvement
  - Identify areas of excellence
- Develop OHSMS documentation policies and procedures
  - Include a systematic review process
  - Implement documentation practices
  - Clearly communicate plans to operationalize document management systems and processes

504: MONITOR OCCUPATIONAL HEALTH AND SAFETY PERFORMANCE

OHS performance monitoring is a key function of OHS professionals. Performance management requires the OHS professional to employ appropriate strategies and tools to gather information as part of assessing risks and the effectiveness of controls. As a part of monitoring the effectiveness of controls and risk management processes, OHS professionals should be able to interpret data describing OHS performance and identify the factors affecting performance. This should include:

- Leading and lagging indicators
- Documentation
- Worker behaviours and compliance
- Ensuring OHS consistency in workplaces with multiple locations

Prerequisites	503
References in other Frameworks	Board of Canadian Registered Safety Professionals: HRCM5, HSM21, HSM22, HSM23 Institute for Occupational Safety and Health: TC1, CC6

504: MONITOR OCCUPATIONAL HEALTH AND SAFETY PERFORMANCE

Understand and Remember
Demonstrate understanding of

- Potential sources or modes of failure in controls
- Risk control and hazard monitoring techniques
- Work environment monitoring
- The role of health surveillance and health risk assessments
- Principles for selecting performance measures
- Key performance indicators (qualitative, quantitative, leading and lagging)
- Criteria and processes for monitoring and validating critical controls
- Benchmarking
- Basic principles of quantitative and qualitative evaluation methodologies

Apply and Analyze
Demonstrate ability to

- Communicate the results of OHS monitoring processes
- Provide training in the collection and use of OHS monitoring data
- Apply OHS performance monitoring data to continuous improvement processes

Evaluate and Create
Demonstrate ability to

- Select appropriate performance measures
- Evaluate existing OHS performance monitoring processes, including:
  - Compliance audits
  - OHSMS audits
  - Review of protocols, procedures, and relevant standards
- Develop new OHS performance monitoring processes or adapt in response to changes in the workplace context

505: PERFORM OHS MANAGEMENT SYSTEM AUDITS

OHS Management System standards all require the regular implementation of audits. Auditing is a challenging task which requires extensive experience and training. The OHS professional should be sufficiently knowledgeable about and competent in OHSMS auditing in order to decide what kind of audit is required, its effective implementation, and its use as part of a monitoring and continual improvement strategy. This includes knowing how to effectively design and conduct safety observation tours, gap audits, compliance audits, documentation audits and other inspections of various types.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM15, HSM19, HSM25
International Network of Safety & Health Professional Organisations: C16
Institute for Occupational Safety and Health: TC1

505: PERFORM OHS MANAGEMENT SYSTEM AUDITS

Understand and Remember
Demonstrate understanding of

- The purpose and goals of OHSMS audits
- Different types of OHSMS audits
  - Internal and external audits
- The process of OHSMS auditing
- Different types of evidence, such as:
  - Documentation
  - Observation
  - Interviews
- Scoring systems and score interpretations

Apply and Analyze
Demonstrate ability to

- Prepare an audit work plan
- Prepare audit scope
- Conduct documentation review
- Conduct a gap analysis
- Gather and evaluate different types of evidence from documentation, observation, and interviews
- Identify (lack of) compliance with OHSMS standards
- Provide recommendations for improvement

Evaluate and Create
Demonstrate ability to

- Execute the lead auditor functions in a complex environment conducting an OHSMS audit according to a recognized standard, such as:
  - COR
  - ISO 45001
- Compile audit findings into a professional report
- Review audit results with the audited organization
  - Identify areas of excellence
  - Identify opportunities for improvement
- Interpret implications to senior executives and workers
- Develop a post-audit action plan to facilitate continuous improvement

506: DEVELOP HEALTH AND SAFETY POLICY

The OHS professional should be able to develop OHS policy that integrates with the business strategy, drivers, and culture, and supports productivity and success. The policy must describe the intent of the organization and its approach to OHS and specific objectives. Accountabilities, responsibilities, and arrangements for delivering a safe operation must be described in the policy or associated documents.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM5
Institute for Occupational Safety and Health: TC1

506: DEVELOP HEALTH AND SAFETY POLICY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to workplace safety policies
- OHS Policy goals and objectives, such as:
  - Preventing injuries
  - Mitigating risk
  - Adhering to legislation and regulations
  - Facilitating continuous improvement
- How to interpret OHS policy documents

Apply and Analyze
Demonstrate ability to

- Provide training in the adherence to OHS policy
- Implement continuous improvement procedures through OHS policy review
- Effectively communicate policies to workers

Evaluate and Create
Demonstrate ability to

- Evaluate existing OHS policy
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop new OHS policy or adapt in response to changes in the workplace context

507: ADMINISTER AN OHS MANAGEMENT SYSTEM

Effectively administering an OHSMS involves managing the organization's individual health and safety programs using a coordinated approach within the complex interactive workplace environment. Individual health and safety programs are required to protect people from harm under occupational health and safety legislation in most Canadian jurisdictions, but full OHS management systems are generally not mandated. In order to act as an effective resource in their workplace, the OHS professional should be able to:

- Administer health and safety programs
- Communicate how an OHSMS integrates with existing operational processes
- Perform evaluations of performance and communicate results
- Develop an OHSMS which meets the requirements of an accredited standard

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM15
Institute for Occupational Safety and Health: CC6

507: ADMINISTER AN OHS MANAGEMENT SYSTEM

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to the individual OHS programs within an OHSMS • How an OHSMS integrates with other business systems • Requirements for maintaining an OHSMS ◦ Considerations for maintaining an OHSMS across multiple worksites
Apply and Analyze *Demonstrate ability to*	• Adhere to established processes for OHSMS administration according to prescribed program standards • Conduct regular reviews to assess performance • Communicate performance evaluation results • Communicate identified areas for improvement

Evaluate and Create *Demonstrate ability to*	• Evaluate an existing OHSMS
	  ◦ Identify opportunities for improvement
	  ◦ Identify areas of excellence
	• Develop an OHSMS according to an applicable standard

508: PROVIDE OHS TRAINING AND INSTRUCTION

An OHS professional is often responsible for some level of training in their organization. In order to ensure that employees are trained to perform their roles competently and safely, the OHS professional must demonstrate the ability to assess, plan, develop, and facilitate OHS related training and instruction. Depending on the organizational context, this training may take many different forms, from classroom-based instruction to one-on-one mentorship. In order for the OHS professional to be an effective resource, they must demonstrate understanding of the foundational concepts behind adult education, including:

- How to effectively deliver information
- Competency assessment and follow-up

In addition, the OHS professional should demonstrate competence in the delivery of training in a variety of contexts, including:

- Coaching and mentoring
- Informal instruction, such as advising workers on-the-job
- Formal instruction, such as a toolbox talk or group-learning facilitation

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS
Institute for Occupational Safety and Health: BC12

508: PROVIDE OHS TRAINING AND INSTRUCTION

Understand and Remember
Demonstrate understanding of

- Concepts related to education and training, such as:
  - What makes a successful trainer
  - Basic principles of adult learning
  - Choosing training methods
  - Dealing with difficult trainees
  - Learning and assessment accommodations
- Records management and retention requirements
- The concept of competency

Apply and Analyze
Demonstrate ability to

- Communicate effectively in the context of training and instruction
  - Providing a blend of proactive and responsive support
  - Informal advice and constructive feedback
  - Formal advice in the form of training reports
- Provide training and instruction in a workplace context
- Conduct a training needs assessment
- Follow records management and retention procedures
- Measure competency using appropriate assessment
- Research providers, instructor qualifications, and course learning objectives to make recommendations for training

Evaluate and Create
Demonstrate ability to

- Evaluate the adequacy of existing workplace training programs
  - Identify opportunities for improvement
  - Identify areas of excellence
- Evaluate OHS training needs
- Create competency assessments to address identified gaps
- Develop training resources, such as:
  - Toolbox talks
  - Lunch and Learn sessions
- Develop an OHS training and recertification plan for the organization
- Develop OHS training records and retention guidelines and procedures

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management

OHS Management Systems

Integrating OHS and Business **6**

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas


6

6 Integrating OHS and Business

An OHS professional who possesses a degree of business acumen provides value to their employer by being able to highlight the business value of OHS in all situations. They are able to effectively communicate how solutions to OHS problems add value to the organization and make business sense. Integrating OHS and business goals is an ongoing challenge and opportunity that requires the OHS professional to employ a wide array of competencies in order to improve worker safety while maintaining an awareness of how businesses operate on a day-to-day basis.

601 Demonstrate
Understanding of fundamentals of business administration and operations

602 Demonstrate
Understanding of the intersection between OHS and human resource processes

603 Support
A Joint Health and Safety Committee

604 Perform
Information gathering, data analysis, and forecasting

605 Participate
In OHS strategy development

606 Manage
OHS-related workplace projects

607 Develop
And implement an OHS continuous improvement plan

608 Integrate
Health and safety with corporate social responsibility

609 Utilize
Financial planning strategies

610 Demonstrate
Evidence-based decision-making practices

611 Identify
And implement methods for risk evaluation and decision making in a business environment

601: DEMONSTRATE UNDERSTANDING OF FUNDAMENTALS OF BUSINESS ADMINISTRATION AND OPERATIONS

In order for an OHS professional to adequately support an OHS management system, it is necessary to possess business competencies. Possessing adequate business acumen enables the OHS professional to better understand the implications of OHS decisions to the business. It also enables the effective translation of OHS risk management goals into sound business decisions. Understanding how businesses function allows the OHS professional to better integrate OHS priorities into daily operational processes and long-term strategic goals. The fundamentals of business administration and operations which an OHS professional must understand include:

- Structures of business organization
- Accounting processes
- Effective communication and meeting practices
- Project planning and management
- Document management
- Operations management

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM4, HSM27, EPRF6, MS4, MS7
International Network of Safety & Health Professional Organisations: F27, F30
Institute for Occupational Safety and Health: BC12

601: DEMONSTRATE UNDERSTANDING OF FUNDAMENTALS OF BUSINESS ADMINISTRATION AND OPERATIONS

Understand and Remember
Demonstrate understanding of

- Structures of business organization
- Basic accounting processes
- Effective communication and meeting practices
- Project planning and management
- Document management
- Basic operations management

Apply and Analyze
Demonstrate ability to

- Participate in or direct meetings
- Implement project work plans
  - Coordinate resources
  - Act as a project manager
  - Participate in project planning
- Relate safety processes to business impact and costs

Evaluate and Create
Demonstrate ability to

- Contribute to strategic planning processes
- Develop OHS improvement work plans in alignment with business goals

602: DEMONSTRATE UNDERSTANDING OF THE INTERSECTION BETWEEN OHS AND HUMAN RESOURCE PROCESSES

OHS professionals implement OHS programs that impact people. Therefore, it is important for an OHS professional to be knowledgeable and skilled in important people-centric competencies and enable a strong connection between OHS and the workers' adoption of OHS programs and processes that create a strong health and safety culture.

In order to act as an effective resource in the workplace, an OHS professional should be able to:

- Demonstrate people-centric skills
- Demonstrate critical influencing skills
- Facilitate work-modification plans or return-to-work plans
- Support training and worker progression opportunities

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM5, HSM27, MS4
Institute for Occupational Safety and Health: TC5, CC6

602: DEMONSTRATE UNDERSTANDING OF THE INTERSECTION BETWEEN OHS AND HUMAN RESOURCE PROCESSES

Understand and Remember
Demonstrate understanding of

- Basic Human Resource processes and their relation to OHS
- How workplace accommodations can be integrated with OHS
- Return-to-work plans
- Work modification plans
- People-centric skills

Apply and Analyze
Demonstrate ability to

- Participate in interview processes
  - Recruitment
  - Incident investigations
- Maintain documentation
  - Training records
- Facilitate safety orientations
- Implement return-to-work and work-modification plans
- Apply soft skills in various situations

Evaluate and Create
Demonstrate ability to

- Evaluate the effectiveness of collaboration between OHS and other departments in an organization
  - Identify areas of excellence
  - Identify opportunities for improvement
- Facilitate the development of return-to-work and work-modification plans
- Oversee workforce training programs
- Monitor credentials and documentation
- Evaluate workforce OHS training programs

603: SUPPORT A JOINT HEALTH AND SAFETY COMMITTEE

The OHS professional is an important resource in the workplace. They must be competent to provide OHS knowledge and support to an organization's Joint Health and Safety Committee (JHSC), or, for some small employers, a Worker's Health and Safety Representative (WHSR), in order to support the organization's overall OHS performance.

In order to effectively collaborate with a JHSC or WHSR, an OHS professional must be competent in a variety of skills. These include:

- Communicating legislative and regulatory requirements
- Facilitating discussion between workers and employers and supporting decision-making
- Providing training
- Negotiation
- Project management

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM11

603: SUPPORT A JOINT HEALTH AND SAFETY COMMITTEE

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to Joint Health and Safety Committees (JHSC) and Worker Health and Safety Representatives (WHSR)
- Governance requirements
- Labour relations dynamics
- Differences in requirements between small and large businesses
- JHSC vs WHSR

Apply and Analyze
Demonstrate ability to

- Monitor activity of JHSC
  - Ensure processes being followed for incident investigations, inspections, hazard identification, refusal of unsafe work, recommendations to management, etc.
- Manage existing training programs
  - JHSC structure, roles, responsibility
  - Training for new members
  - Continual development
- Facilitate communication between JHSC, or WHSR, and employers or regulatory bodies
- Assist in documentation management
- Act as an information resource to the JHSC or WHSR

Evaluate and Create
Demonstrate ability to

- Evaluate the effectiveness of the JHSC
  - Identify areas of excellence
  - Identify opportunities for improvement
- Facilitate the development of a new JHSC
- Provide training to JHSC members or WHSR

604: PERFORM INFORMATION GATHERING, DATA ANALYSIS, AND FORECASTING

All organizations require a capacity for information gathering, data analysis, and forecasting. Often, this may be an informal process. However, in order for an organization to improve its OHS-related outcomes, it is sometimes the responsibility of the OHS professional to perform or facilitate information gathering, data analysis, and forecasting tasks in order to relate OHS performance to operational processes. In order to act as an effective resource in this area, the OHS professional should demonstrate competence with:

- Knowledge collection
- Knowledge analysis
- Quantitative and qualitative data analysis
- Knowledge communication and transfer

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM18, HSM23, HSM24, THSS9
International Network of Safety & Health Professional Organisations: F30
Institute for Occupational Safety and Health: CC7

604: PERFORM INFORMATION GATHERING, DATA ANALYSIS, AND FORECASTING

Understand and Remember
Demonstrate understanding of

- Effective uses and limitations of data and measurement processes
- Basic statistical measures, including sources of error
- Data display and reporting
- Principles of research methodology

Apply and Analyze
Demonstrate ability to

- Conduct assessments of intervention effectiveness
- Use data analysis software
- Assess short- and long-term implications of collected data
- Interpret and communicate the results of OHS data analysis
  - To a lay audience
  - To a technical audience

Evaluate and Create
Demonstrate ability to

- Evaluate organizational data collection and analysis processes
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop organizational data collection processes or adapt existing processes in response to a change in the workplace context
- Design assessments of intervention effectiveness in novel contexts

605: PARTICIPATE IN OHS STRATEGY DEVELOPMENT

Strategy development requires OHS professionals to both lead and contribute to the organization's strategic direction, considering the bigger picture while setting priorities and charting the way forward. Individuals should identify and consider emerging issues and development opportunities, along with associated risks, while articulating a series of new innovative and sustainable business options and recommendations. Maintaining a broad strategic perspective while identifying and focusing on crucial drivers will be critical to the success of the OHS management system and to the wider business.

The OHS professional evaluates interdependencies of OHS risks and other risks in the organization, including operational risks, internal and external uncertainties, and opportunities, along with possible operational failure points and associated business and resource implications.

In order to act as an effective resource in their organization, they should be able to fully appreciate the potential impact of OHS risk realization on the business and can articulate that in commercial terms as well as the usual moral, ethical, and financial arguments.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM24, EPRF1, MS8
International Network of Safety & Health Professional Organisations: F29
Institute for Occupational Safety and Health: CC6

605: PARTICIPATE IN OHS STRATEGY DEVELOPMENT

Understand and Remember
Demonstrate understanding of

- The purpose and content of strategic plans
- How organizations develop strategic plans
- How day-to-day operations contribute to long-term strategic plans and goals

Apply and Analyze
Demonstrate ability to

- Integrate strategic goals into day-to-day OHS operations through:
  - KPI measurement and data collection
  - Adapting operational processes
- Communicate the value of including OHS strategy in overall strategic planning

Evaluate and Create
Demonstrate ability to

- Evaluate existing OHS strategy
  - Identify areas of excellence
  - Identify opportunities for improvement
  - Identify conflicts with existing strategic plans and goals
  - Identify areas of alignment with existing strategic plans and goals
- Develop a new OHS strategy or adapt in response to changes in the workplace context
  - Integrate with existing strategic plans and goals
- Develop KPIs and set goals

606: MANAGE OHS-RELATED WORKPLACE PROJECTS

The OHS professional needs to be able to create plans for managing OHS by integrating OHS projects with existing business projects and programs, from simple to complex. Effectiveness in this task requires the ability to identify objectives, tasks, resources, risks, and associated mitigation challenges, along with budgets, timelines, and project or program governance needs. The audience is often broad and complicated, so skills in collaboration, communication, and cooperation are key as OHS project managers navigate the organization's stakeholders.

In order to act as an effective resource, the OHS professional should demonstrate a thorough understanding of the following concepts:

- Key requirements for successful projects
- Project conceptualization and design
- Project planning, including:
  - Budgeting
  - Implementation
  - Monitoring
  - Project evaluation

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS11
International Network of Safety & Health Professional Organisations: F28
Institute for Occupational Safety and Health: CC7, CC8, BC9

606: MANAGE OHS-RELATED WORKPLACE PROJECTS

Understand and Remember
Demonstrate understanding of

- Project management methods and strategies
- How to read a project budget
- Project management tools

Apply and Analyze
Demonstrate ability to

- Use project management tools, such as:
  - Gantt charts
  - JIRA
- Implement a project work plan
  - Coordinate resources
  - Meet deadlines
  - Communicate with stakeholders

Evaluate and Create
Demonstrate ability to

- Evaluate existing project management procedures
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop project management procedures
- Develop a project work plan
  - Define roles and responsibilities
- Implement follow-up processes for quality control
- Assess and evaluate projects upon completion

607: DEVELOP AND IMPLEMENT AN OHS CONTINUOUS IMPROVEMENT PLAN

Continuous improvement models are used as a vital aspect of both business quality management processes and OHS Management Systems to achieve continued relevance and improvement. By using appropriate tools and planning techniques, the OHS professional can ensure that the OHS program in an organization will steadily improve.

Integrating OHS and operational processes requires setting realistic objectives for improvement. OHS professionals can ensure that objectives are set within the right deadlines and with appropriate budgets and resources put in place for effective delivery. OHS professionals often need the ability to advise on delivery and design of implementation solutions, particularly the establishment of the right performance measures to ensure the plan supports deliverables.

In order to act as an effective resource in the workplace, OHS professionals should demonstrate understanding of:

- Continuous improvement models
- The integration between OHS continuous improvement practices and business operations

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS9
International Network of Safety & Health Professional Organisations: C19
Institute for Occupational Safety and Health: TC1, TC2, TC4

607: DEVELOP AND IMPLEMENT AN OHS CONTINUOUS IMPROVEMENT PLAN

Understand and Remember
Demonstrate understanding of

- Continuous improvement models and their application to OHS
- Relevant continuous improvement standards, such as:
  - CSA Z1000-19
  - ISO 9000
- Requirements for effective goal setting

Apply and Analyze
Demonstrate ability to

- Implement or maintain an existing continuous improvement plan
- Identify improvements based on OHS performance assessments
- Implement identified improvements with plans for continued assessment and improvement
- Communicate implementation and workflow adjustments

Evaluate and Create
Demonstrate ability to

- Evaluate an existing continuous improvement plan
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop a new continuous improvement plan, or adapt in response to changes in workplace context
- Communicate results of continual improvement processes to all employee levels

608: INTEGRATE HEALTH AND SAFETY WITH CORPORATE SOCIAL RESPONSIBILITY

All workplaces exist in a social context, and organizations often have a degree of corporate responsibility to stakeholders outside of the organization. In the context of OHS, organizations may have safety impacts on surrounding environments or populations. In some workplaces, the OHS professional may be required to evaluate the impact of various policies or strategies in the context of corporate social responsibility.

In order to act as an effective resource in this area, the OHS professional should demonstrate understanding of the following concepts:

- How an organization balances its needs as a commercial entity and commitments to external stakeholders
- The impact of businesses on their local environment
- How OHS practices can impact a local population, environment, and organizational reputation

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: EPRF6, EPRF7
International Network of Safety & Health Professional Organisations: F30
Institute for Occupational Safety and Health: TC5

608: INTEGRATE HEALTH AND SAFETY WITH CORPORATE SOCIAL RESPONSIBILITY

Understand and Remember
Demonstrate understanding of

- Shareholder management
- Broader stakeholder management
- Environmental footprint
- Implications to brand and corporate image or reputation

Apply and Analyze
Demonstrate ability to

- Communicate effectively and with authority at different stakeholder levels
- Apply considerations for Corporate Social Responsibility in decision making

Evaluate and Create
Demonstrate ability to

- Evaluate existing OHS policies, programs, or business processes for consideration with regards to Corporate Social Responsibility
- Develop OHS policies or business plans which integrate health and safety with Corporate Social Responsibility

609: UTILIZE FINANCIAL PLANNING STRATEGIES

In order for OHS processes to be integrated with broader operational processes, OHS professionals must be able to effectively and efficiently manage the financial resources of the OHS portfolio and more widely across the business to leverage value while reducing wasteful spending. Being able to undertake relevant financial reporting, or contributing to such reporting, is essential. In addition, ongoing monitoring of the financial performance of OHS projects or processes will ensure the availability of future resources. Being familiar with, and versed in, the budgetary process, profit and loss, and return on investment (ROI) are critical skills.

Prerequisites

References in other Frameworks

International Network of Safety & Health Professional Organisations: F30
Institute for Occupational Safety and Health: TC5, CC7

609: UTILIZE FINANCIAL PLANNING STRATEGIES

Understand and Remember
Demonstrate understanding of

- Budgeting tools
  - Budgeting software
  - Spreadsheet software
- How to read financial statements

Apply and Analyze
Demonstrate ability to

- Use budgeting software
- Develop reports detailing the ROI for OHS projects
- Develop a budget for an OHS project
  - For a specific project
  - For continuous improvement processes

Evaluate and Create
Demonstrate ability to

- Communicate the results and impact of budget changes to different audiences
- Evaluate existing OHS budgeting practices
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop new or adapt existing OHS budgeting practices in response to a change in the workplace context

610: DEMONSTRATE EVIDENCE-BASED DECISION-MAKING PRACTICES

Decision-making is an important aspect of daily OHS operations. OHS professionals need to demonstrate the ability to make decisions on strategic and tactical issues. As they progress within the organization, those decisions become more complex, present higher risk, and are subject to higher levels of scrutiny. The OHS professional will be expected to provide evidence for their decisions and recommendations, demonstrating that appropriate rationale has been applied.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: EPRF9
Institute for Occupational Safety and Health: CC7

610: DEMONSTRATE EVIDENCE-BASED DECISION-MAKING PRACTICES

Understand and Remember
Demonstrate understanding of

- Sources of data related to OHS process improvements
  - Costs
  - Benefits
  - Cost-benefit analyses
- How to incorporate relevant data and research into project work plans

Apply and Analyze
Demonstrate ability to

- Perform independent research
- Locate appropriate expertise and resources
- Conduct a cost-benefit analysis according to existing procedures and guidelines
  - Collect evidence and data
- Write reports

Evaluate and Create
Demonstrate ability to

- Present research in a formal context
- Communicate findings and rationale to workers and managers
- Evaluate research and recommendations by others

611: IDENTIFY AND IMPLEMENT METHODS FOR RISK EVALUATION AND DECISION MAKING IN A BUSINESS ENVIRONMENT

The OHS professional must thoroughly understand the business context in order to adequately evaluate risk and to make appropriate decisions that impact business operations. Different business operations have different levels of risk tolerance, and developing appropriate solutions requires familiarity with:

- Sources of information on risk, such as previous education, relevant experts, and professional standards
- Methods of risk assessment
  - Qualitative and quantitative methods for estimating levels of risk, including issues and limitations

In addition, depending on the workplace context, it may be important to be familiar with concepts related to risk perception and risk communication, including:

- The role of the workforce in decision-making
- Trade unions
- Public and other stakeholders

Prerequisites	
References in other Frameworks	Institute for Occupational Safety and Health: TC2, CC7

611: IDENTIFY AND IMPLEMENT METHODS FOR RISK EVALUATION AND DECISION MAKING IN A BUSINESS ENVIRONMENT

Understand and Remember *Demonstrate understanding of*	• Sources of information on risk • Defining acceptable levels of risk • How business contexts impact levels of risk tolerance • How OHS goals interact with business decision-making processes
Apply and Analyze *Demonstrate ability to*	• Make business-related OHS decisions with supporting rationale • Engage workforce stakeholders in decision-making
Evaluate and Create *Demonstrate ability to*	• Evaluate the impact of OHS decisions in the broader business context

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas

7 Professional Skills and Conduct

At times, the OHS professional will find it challenging to maintain the balance between a commitment to business goals as well as a worker's right to safe work environment. Continual professional support and development is vital to maintaining the strength of professional identity and integrity necessary to continually strive to improve the OHS environment in an organization. Competency in and understanding of how to be a life-long learner, how to respond to ethical dilemmas, and how to solve problems are key skills for the OHS professional.

701 Demonstrate
Understanding of legislation, regulations and standards for OHS

702 Demonstrate
Understanding of health and safety governance

703 Communicate
Effectively in the workplace

704 Demonstrate
Problem-solving ability

705 Manage
Stakeholders

706 Practice
Ethical and professional conduct

707 Adhere
To personal responsibilities and accountabilities

701: DEMONSTRATE UNDERSTANDING OF LEGISLATION, REGULATIONS AND STANDARDS FOR OHS

OHS professionals must be able to interpret and comply with laws, legislation, regulations and standards that govern their organizations' operations. Legislation can sometimes be insufficient to meet the demands of the risk profile. In such cases, OHS professionals must consider the spirit and intent of the law and apply good practice and OHS judgement to reduce risk.

In order to act as an effective resource in their organization, an OHS professional should be able to:

- Understand how local legislation and regulations apply to a workplace
- Use tools and techniques for evaluating compliance with legislation, regulations, and standards
- Analyze a workplace for legislative and regulatory compliance and provide recommendations for corrective action
- Implement compliance and enforcement policies and strategies

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM8, HSM12, HSM13
International Network of Safety & Health Professional Organisations: C14
Institute for Occupational Safety and Health: TC1

701: DEMONSTRATE UNDERSTANDING OF LEGISLATION, REGULATIONS AND STANDARDS FOR OHS

Understand and Remember *Demonstrate understanding of*	• Occupational health and safety regulation • Employment standards and privacy legislation • Workers' compensation board standards • Canadian and international OHS standards
Apply and Analyze *Demonstrate ability to*	• Clearly communicate the relevance and importance of OHS legislation, regulations, and standards in the context of a specific organization • Use existing tools and assessments developed with relevant legislation, regulations, and standards for OHS • Provide recommendations for corrective actions or controls
Evaluate and Create *Demonstrate ability to*	• Adapt processes or practices to the workplace context • Conduct OHS compliance audits • Identify opportunities for improvement • Identify areas of excellence • Evaluate existing programs or policies • Develop new programs or policies in response to changes in the workplace context

702: DEMONSTRATE UNDERSTANDING OF HEALTH AND SAFETY GOVERNANCE

OHS governance in a corporate context essentially involves balancing the interests of an organization's many stakeholders such as workers, shareholders, management, customers, suppliers, financiers, government, and the community. It includes assurance mechanisms that routinely check that the organization's risk profile is accurate, that sufficient control is in place, and that management is effective. Governance includes structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity, inclusiveness, empowerment, and broad-based participation.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: HSM8, HSM11, HSM12
International Network of Safety & Health Professional Organisations: D20
Institute for Occupational Safety and Health: TC1

702: DEMONSTRATE UNDERSTANDING OF HEALTH AND SAFETY GOVERNANCE

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to OHS governance • The application of governance processes including policy, terms of reference, and meeting rules
Apply and Analyze *Demonstrate ability to*	• Identify gaps in existing OHS governance-related policy • Participate in effective governance mechanisms • Communicate clearly to relevant parties
Evaluate and Create *Demonstrate ability to*	• Provide recommendations for improvements to existing OHS governance related policy and procedures • Collaborate with leadership to improve company OHS practices

703: COMMUNICATE EFFECTIVELY IN THE WORKPLACE

Communication is one of the primary tasks of OHS professionals in many workplaces. OHS professionals provide guidance, training, written documentation, reports, and presentations to a wide variety of audiences. OHS professionals must also be able to apply receptive communication skills when participating in conversations, presentations, or meetings or when reading reports and technical documentation. Having the skills necessary to adequately communicate about a wide variety of topics is vital to improving the safety performance of a workplace.

In order to act as an effective resource in the workplace, OHS professionals should demonstrate proficiency in:

- Oral communication
- Written communication
- Reading
- Receptive communication
- Behavioural communication

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS1, MS2
International Network of Safety & Health Professional Organisations: C18
Institute for Occupational Safety and Health: CC7, BC9, BC11

703: COMMUNICATE EFFECTIVELY IN THE WORKPLACE

Understand and Remember
Demonstrate understanding of

- How to work with common office programs (e.g., Excel, Word, Outlook, internet browsers)
- Acceptable forms of communication for different contexts or messages
- Non-verbal communication cues
- The dynamics of communication between different groups
  - Communication barriers between different culture or language groups
- Oral communication
  - Presentations, participation in meetings, informal and formal conversations
- Written communication
  - Emails, RADIANS (exports, memos, project plans)
- Reading
  - Technical and non-technical documents
- Receptive communication
- Active listening
  - Recognize and understand alternative views
- Behavioural communication
  - Visual cues
  - Physical mannerisms
- Conflict management

Apply and Analyze
Demonstrate ability to

- Tailor communications to specific audiences
- Write clear memos and reports to both technical and non-technical audiences
- Apply appropriate writing style, grammar, and spelling
- Express both technical and non-technical issues and ideas clearly to both technical and non-technical personnel
  - Oral communication
  - Written communication

Evaluate and Create
Demonstrate ability to

- Write and evaluate technical and non-technical OHS-related documents
- Evaluate workplace communication protocols for OHS-related processes
  - Identify areas of excellence
  - Identify opportunities for improvement
- Develop new or adapt communication protocols for OHS-related processes in response to changes in workplace context

704: DEMONSTRATE PROBLEM-SOLVING ABILITY

The OHS professional is often faced with novel, complex problems. Acting as an effective resource in the workplace requires the ability to solve new problems efficiently through the use of appropriate tools and techniques. This includes the ability to investigate, assess, and evaluate issues and events that have an impact on the business. The monitoring of solutions through adequate reporting provides opportunity for continuous improvement in safety outcomes.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS3
Institute for Occupational Safety and Health: BC9, BC10

704: DEMONSTRATE PROBLEM-SOLVING ABILITY

Understand and Remember
Demonstrate understanding of

- Problem-solving methods and tools
- Cause-effect analyses
- How to assess the short- and long-term impact of decisions

Apply and Analyze
Demonstrate ability to

- Recognize prototypical OHS problems
  - "Yes, this is a classic example of X"
- Identify standard OHS problem solutions
  - "The standard solution is Y"

Evaluate and Create
Demonstrate ability to

- Develop solutions to novel or recurring problems
  - Problems for which the standard solution is insufficient
  - Problems for which there is no best-practice guidance available
- Develop policy or procedures to prevent recurrence or introduction of new problems
  - Integrate or develop best practices and recognized standards
- Clearly communicate regarding the problem and its solution
  - Root-cause breakdown
  - Implications of the problem
  - Cost-benefit analyses of potential solutions

705: MANAGE STAKEHOLDERS

OHS professionals are often required to navigate between the overlapping or conflicting interests of different stakeholders. Being mindful of potential responses to a range of situations is critical to informing the OHS professional's personal approach, thereby gaining buy-in and cooperation, and building relationships. This requires individuals to build an awareness of interactions between stakeholder groups and their perceptions of OHS practice throughout the business, internally and externally. Depending on the level of responsibility required by their organization, OHS professionals may play a role in stakeholder engagement. Developing networks inside and outside of the business enables the OHS professional to use their influence in a broad range of situations.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: MS1, MS7
Institute for Occupational Safety and Health: CC6, BC9

705: MANAGE STAKEHOLDERS

Understand and Remember
Demonstrate understanding of

- How the interests and values of different stakeholder groups impact OHS practices
  - Individual attributes such as thought patterns, motivations, goals and ambitions, emotional responses, strengths, and weaknesses
  - Organizational aspects, such as strategic planning goals, mission statements, business success and longevity
  - External stakeholders, such as local communities, government bodies, or other businesses or professionals

Apply and Analyze
Demonstrate ability to

- Develop communication in support of effective and sustainable OHS practice
  - Internal stakeholders
  - External stakeholders
- Address the interests of relevant stakeholders
  - Evaluate and communicate the effect of different OHS-related decisions on internal and external stakeholders.

Evaluate and Create
Demonstrate ability to

- Develop messaging and policy regarding stakeholder management
- Develop plans for stakeholder engagement
- Participate in negotiation with stakeholders
- Evaluate alternative perspectives to achieve the desired outcomes
- Communicate effectively to represent organizational goals, vision, and arguments for action to different audiences
  - Workers
  - Executives
  - External stakeholders

706: PRACTICE ETHICAL AND PROFESSIONAL CONDUCT

OHS professionals operate in a position of substantial responsibility and are often privy to personal information and sensitive business matters. To be a trusted resource in an organization, OHS professionals must maintain honesty and transparency at all times and adhere to the highest standards of professional conduct. Demonstrating integrity in all aspects of professional practice is critical for the success of both the professional and their workplace.

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: EPRF1, EPRF4
International Network of Safety & Health Professional Organisations: D20
Institute for Occupational Safety and Health: TC5, BC10

706: PRACTICE ETHICAL AND PROFESSIONAL CONDUCT

Understand and Remember *Demonstrate understanding of*	• The roles, responsibilities, and duties of OHS professionals • Conflicts of interest • Professional ethics and codes of conduct • Whistleblowing

Apply and Analyze *Demonstrate ability to*	• Identify conflicts of interest in the context of the organization
	• Raise concerns regarding conflicts of interest or business practice to the relevant leader
	• Practice professional conduct in their role by
	  ◦ Acting with impartiality and integrity
	  ◦ Maintaining confidentiality
	  ◦ Independently managing competence through professional development

Evaluate and Create *Demonstrate ability to*	• Evaluate organizational performance with respect to maintaining professional and ethical conduct
	  ◦ Procedures for resolving conflicts of interest
	  ◦ Disciplinary processes
	• Provide training in matters of workplace professional conduct
	• Contribute to professional codes of conduct
	  ◦ Within their own organization
	  ◦ Within a professional association

707: ADHERE TO PERSONAL RESPONSIBILITIES AND ACCOUNTABILITIES

OHS professionals must continue to learn and develop their skills to keep current with changing risk, risk-tolerance levels, technology, and behaviours in the workplace. In assessing personal OHS competence, a professional must demonstrate:

- Self-awareness of strengths, weaknesses, and opportunities for development
- Accountability for their own behaviour, deliverables, health, and well-being
- Awareness and understanding of current and evolving best practice
- Willingness to develop skills or knowledge required
- Commitment to continual professional development

Prerequisites

References in other Frameworks

Board of Canadian Registered Safety Professionals: EPRF2, EPRF3, EPRF4, EPRF5
Institute for Occupational Safety and Health: TC5, BC10, BC11

707: ADHERE TO PERSONAL RESPONSIBILITIES AND ACCOUNTABILITIES

Understand and Remember
Demonstrate understanding of

- Tools and resources for OHS professional development
- Professional networks for OHS practitioners
- Goal setting and prioritization
- How to balance personal and business priorities

Apply and Analyze
Demonstrate ability to

- Learn independently
- Develop a personal professional development plan
  - Present, implement, and evaluate outcomes
  - Consider budgetary and resource limitations
  - Create goals, objectives, and a work plan
- Follow work plans without supervision

Evaluate and Create
Demonstrate ability to

- Develop a professional development plan for others
  - Present, implement, and evaluate outcomes
  - Consider budgetary and resource limitations
  - Create goals, objectives, and a work plan
- Supervise professional development plans for others

OHS COMPETENCY FRAMEWORK

Hazard and Risk Evaluation

Psychological Health and Well-Being

Hazard and Risk Mitigation

Incident Management

OHS Management Systems

Integrating OHS and Business

Professional Skills and Conduct

Manufacturing-Specific Knowledge Areas

Manufacturing-Specific Knowledge Areas

The *Manufacturing-Specific Knowledge Areas* describe specialized hazard and risk areas that an OHS professional working in the manufacturing sector needs to be effective. This section represents the risk areas that are prevalent in the manufacturing sector and which require additional expertise, above and beyond the *Core Competency* areas, in order to adequately address the OHS needs in the workplace. It is vital that OHS professionals possess suf cient knowledge and training to recognize each of these hazard areas and be able to apply the Core Competencies where relevant. While no OHS professional is expected to act as a subject matter expert in all of the *Knowledge Areas*, they must possess sufficient knowledge to identify when outside expertise is needed.

8

801 Autonomous
Equipment, robotics, and machine safety

Prerequisites: Core Areas

802 Combustible
Dust safety

Prerequisites: Core Areas

803 Confined
Space safety

Prerequisites: Core Areas

804 Contractor
Safety

Prerequisites: Core Areas

805 Cyber
Security risks and hazards

Prerequisites: Core Areas

806 Electrical
Safety

Prerequisites: Core Areas

807 Ergonomics
And human factors

Prerequisites: Core Areas

808 Fall
Protection

Prerequisites: Core Areas

809 Handling
And transportation of dangerous goods

Prerequisites: Core Areas

810 Hot
Work safety

Prerequisites: Core Areas

811 Lockout
And de-energization

Prerequisites: Core Areas

812 Mobile
Equipment safety

Prerequisites: Core Areas

813 Occupational
Hygiene

Prerequisites: Core Areas

814 Overhead
Crane and hoist safety

Prerequisites: Core Areas

815 Radiation
Safety: Ionizing Radiation

Prerequisites: Core Areas

816 Radiation
Safety: Non-ionizing Radiation

Prerequisites: Core Areas

817 Supply
Chain safety

Prerequisites: Core Areas

818 Toxic
Process safety

Prerequisites: Core Areas

819 Transportation
And warehousing safety

Prerequisites: Core Areas

820 Working
Alone or in isolation

Prerequisites: Core Areas

801: AUTONOMOUS EQUIPMENT, ROBOTICS, AND MACHINE SAFETY

Safeguarding is any means of preventing workers from coming into contact with the moving parts of machinery or equipment that would potentially cause physical harm. Safeguards can be devices, guards, enclosures, fencing, and location. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to safeguarding
- Conducting hazard assessments which include safeguards
- Providing training for safe operating procedures around equipment and machinery which requires safeguards

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

801: AUTONOMOUS EQUIPMENT, ROBOTICS, AND MACHINE SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to machine safeguarding
- Different types of safeguards, such as:
  - Built-in safeguards
  - Barrier guards
  - Interlocking barrier guards
  - Automatic safeguarding devices
- How to identify hazards requiring safeguarding in a workplace
- Effective controls for equipment and machinery requiring safeguarding in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific hazards and risks requiring safeguarding in a workplace
- Identify changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing hazards requiring safeguarding hazards and risks
- Provide training in safe operating procedures for equipment or machinery requiring safeguarding

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the safeguarding management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for equipment and machinery which requires safeguarding
- Develop a program that describes responsibilities, general hazards, and how safeguarding is to be accomplished
- Develop equipment and machine safeguarding procedures

802: COMBUSTIBLE DUST SAFETY

Combustible dust safety is a component of occupational hygiene. Combustible dust is any material made up of distinct particles that has the ability to catch fire and explode when mixed with air. Combustible dust could be from solid organic material, some metals, or some non-metallic inorganic materials. Dusts are created when materials are transported, handled, processed, polished, ground, and shaped. Manufacturing facilities that generate dusts are potentially at risk for fire or explosion from the processes in their facility. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to combustible dust safety and fire prevention
- How to conduct risk assessments for dust explosion possibilities
- The importance of a good housekeeping and ignition control program
- The importance of worker training requirements, hazard awareness, and reporting procedures
- The implications of combustible dust for emergency planning and response requirements (Fire Safety Plan, Evacuation, First Aid, etc.)

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

802: COMBUSTIBLE DUST SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to combustible dusts
- The five factors of the "Dust Explosion Pentagon": Fuel, Dispersion (making the dust airborne), Oxygen, Ignition, and Confinement
- The importance and frequency of thorough inspections and proper storage
- How to identify combustible dust hazards and risks in a workplace
- Effective controls for combustible dust safety in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific combustible dust hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of relevant safety information for new or changing combustible dust and ignition sources, hazards, and risks
- Provide training in safe operating procedures for combustible dust safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the combustible dust safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for combustible dust safety
- Develop safety resources for newly introduced combustible dust or previously unidentified hazards or risks
- Develop and maintain an effective combustible dust safety management program
  - Including effective combustible dust management of change processes

803: CONFINED SPACE SAFETY

Confined space safety is an important aspect of occupational hygiene. A confined space is a fully or partially enclosed space that:

- Is large enough for a person to enter
- Has not been designed or intended for continuous human occupancy
- Has limited or restricted access or egress or has a design that can complicate the ability for first aid, rescue, evacuation, or other emergency response activities
- Is susceptible to hazards and represents a risk for the safety and health of those who enter it

It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to confined spaces in the workplace
- The definition of, and criteria for, a confined space
- How to identify, assess, control, and manage confined spaces in the workplace

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

803: CONFINED SPACE SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to confined spaces in the workplace
- The definition of, and criteria for, a confined space
- How to manage and control hazards and risks for those working in confined spaces, including permit requirements
- Roles and responsibilities of the supervisor, standby person, entry team, and emergency response team
- Safety procedures, personal protective equipment and other equipment used in confined spaces
- Emergency and rescue plans in confined spaces
- Training requirements for work associated with confined spaces

Apply and Analyze
Demonstrate ability to

- Identify specific confined spaces in a workplace
- Initiate and maintain a confined space program
- Identify critical controls applicable to all confined space entries
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing sources of confined space hazards and risks
- Provide training for work associated with confined spaces

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the confined space safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Develop workplace training for work associated with confined space
- Conduct a training needs analysis
- Develop safety resources for newly introduced confined spaces or previously unidentified hazards or risks
- Develop and maintain a confined space safety management program

804: CONTRACTOR SAFETY

It is the employer's responsibility to ensure that contractors and suppliers are compliant with the necessary safety regulations. It is essential to be knowledgeable about the tenets of effective contractor management, including authorization management procedures and ensuring the competence of contractors to carry out the work safely. The OHS professional must be able to build open and honest relationships with contractors, ensuring that quality information is exchanged and joint decision-making is encouraged wherever appropriate. Contracts need to clearly outline the OHS responsibilities of all parties to ensure the work identified is carried out meeting or exceeding prescribed standards. The contractor worksite must ensure the safety of visitors and suppliers entering the area. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to contractor safety
- Managing relationships with and communicating with contractors
- Ensuring that contractors are qualified for work and following safe operating procedures
- Overseeing and monitoring processes to ensure contractors and subcontractors are meeting health and safety requirements and are following safe operating procedures

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge Institute for Occupational Safety and Health: TC4

804: CONTRACTOR SAFETY

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to contractor safety • How contractor safety management integrates with organizational safety management • Effective controls for contractor safety in the workplace
Apply and Analyze *Demonstrate ability to*	• Identify specific contractor safety hazards and risks in a workplace • Identify opportunities for changes to workplace procedures or controls and make recommendations ◦ Communicate recommendations or requirements and their rationale to contractors • Maintain up-to-date knowledge of changing hazards in a workplace that impact contractor safety • Provide training in safe operating procedures for contractor safety

Evaluate and Create *Demonstrate ability to*	• Conduct a hazard and risk assessment
	• Conduct a review of the contractor safety management processes in a workplace
	  ◦ Identify areas of excellence
	  ◦ Identify areas of (non)compliance
	  ◦ Identify opportunities for improvement
	• Develop workplace training for safe operating procedures for contractor safety
	• Develop safety resources for newly introduced or previously unidentified hazards or risks that impact contractor safety
	• Develop and maintain a contractor safety management program

805: CYBER SECURITY RISKS AND HAZARDS

Cyber security is an area of emerging risk in manufacturing. The degree of connectivity in modern industry is enabling increased productivity and efficiencies in the operation and maintenance of equipment and machinery within the manufacturing industry. However, computerized numerical machining (CNC) machining, autonomous, or semi-autonomous equipment or machinery could be vulnerable to cyberattacks, potentially leading to worker and process safety issues. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to OHS-relevant cyber security
- The intersection between the responsibilities of OHS and IT in managing and controlling the hazards and risk
- How changes in workplace machinery can introduce new OHS hazards and risks
- The importance of not connecting personal equipment to workplace networks

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

805: CYBER SECURITY RISKS AND HAZARDS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to OHS-relevant cyber security
- How to identify potential OHS-relevant cyber security hazards and risks in a workplace
- Effective controls for OHS-relevant cyber security in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific OHS-relevant cyber security hazards in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing OHS-relevant cyber security hazards and risks
- Provide training in safe operating procedures for OHS-relevant cyber security

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the OHS-relevant cyber security management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for OHS-relevant cyber security
- Develop safety resources for newly introduced OHS-relevant cyber security or previously unidentified hazards or risks
- Develop and maintain an OHS-relevant cyber security management program

806: ELECTRICAL SAFETY

All electrical systems have the potential to cause harm. Depending on the context of an organization, electrical safety may be a particular concern due to the risk of direct harm to individuals or to an increased risk of harm through other hazards as a result of machines, devices, or processes involving the use of electricity. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to electrical safety in the workplace
- Different types of harm resulting from electrical currents
- How to assess electrical hazards and electrical safety practices
- Environmental hazards such as electrical lines (overhead or concealed)
- Appropriate use of extension cords, fuse boxes, lighting types, electrical connections, etc.

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

806: ELECTRICAL SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to electrical safety in the workplace
- The difference between bonding and grounding
- Different types of harm resulting from electrical currents
- Effective controls for working with power tools
- How to identify electrical safety hazards in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific electrical safety hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing electrical safety hazards and risks
- Provide training in safe operating procedures for electrical safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the electrical safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for electrical safety
- Develop safety resources for newly introduced or previously unidentified electrical safety hazards
- Develop and maintain an electrical safety management program

807: ERGONOMICS AND HUMAN FACTORS

Ergonomics is the study of people in their working environment and can incorporate workplace processes, workstations, task design, and facility design. Poor ergonomic setups or practices are a common root or direct cause of workplace injuries. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to ergonomics
- How the human body can be injured through workplace processes
  - Body postures
  - Forced postures
  - Posture repetition
- Concepts related to "anthropometrics", the science of measurement of the human body
- How workplace hygiene and ergonomics interact
- Tools for ergonomic assessment

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8, HRCM6, THSS3, THSS4 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

807: ERGONOMICS AND HUMAN FACTORS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to workplace ergonomics
- How the human body moves (functional anatomy)
- What movements place an individual at risk
- The interaction between workplace hygiene and ergonomics
- How to identify ergonomic hazards in a workplace
- Effective controls for ergonomic hazards in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific ergonomic safety hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing ergonomic safety hazards and risks
- Provide training in safe operating procedures for ergonomic safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the ergonomic safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for ergonomic safety
- Develop safety resources for newly introduced ergonomic safety or previously unidentified hazards or risks
- Develop and maintain an ergonomic safety management program

808: FALL PROTECTION

Fall protection involves the proper use of fall protection equipment and the planning, supervision, and training of workers who work at heights. The OHS professional must be familiar with the requirements for workers to use fall protection systems when working at heights where a fall could result in injury. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to working at heights
- Equipment used to control fall hazards and risks
- Assessing safe work procedures for working at heights

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

808: FALL PROTECTION

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to fall protection
- The requirements, hierarchy, proper selection and use of fall protection systems
- How to identify hazards and risks related to working at heights in the workplace
- Effective controls for working at heights in the workplace, such as:
  - Guardrails
  - Fall restraint systems
  - Fall arrest systems
  - Vertical lifelines
  - Safety nets
  - Control zones and safety monitors

Apply and Analyze
Demonstrate ability to

- Identify specific hazards related to working at heights in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing working-at-heights hazards and risks
- Provide training in safe operating procedures for working at heights

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the fall protection management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for working at heights
- Develop safety resources for newly introduced working-at-heights hazards or previously unidentified hazards or risks
- Develop and maintain a fall protection management program

809: HANDLING AND TRANSPORTATION OF DANGEROUS GOODS

The handling and transportation of dangerous goods includes hazardous items required for human or commercial purposes at, or associated within, a business operation. The OHS professional should be sufficiently familiar with the Transportation of Dangerous Goods (TDG) Act and regulations to determine necessary compliance measures for an organization. The OHS professional in manufacturing should also be highly familiar with and competent in the use of the Workplace Hazardous Materials Information System (WHMIS) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in a manufacturing setting. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to hazardous material safety
- Transportation of Dangerous Goods (TDG) Act
- Workplace Hazardous Materials Information System (WHMIS)
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
- The use of hazardous materials in the manufacture of products
- Emergency response to hazardous material spills or leaks

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

809: HANDLING AND TRANSPORTATION OF DANGEROUS GOODS

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to hazardous material safety
- WHMIS
- GHS
- Hazardous material
  - Classification
  - Pictograms
  - Labels
  - Safety data sheets (SDSs)
- Responsibilities of workers, employers, and suppliers
- How to identify hazardous material safety hazards and risks in a workplace
- Effective controls for hazardous material safety in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific hazardous material safety hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing hazardous material safety hazards and risks
- Provide training in safe operating procedures for hazardous material safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the hazardous material safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for hazardous material safety
- Develop safety resources for newly introduced hazardous material safety or previously unidentified hazards or risks
- Develop and maintain a hazardous material safety management program

810: HOT WORK SAFETY

Hot Work is defined as any brazing, cutting, welding, air arcing, or grinding activities that generate sparks or an open flame. This could include powder-actuated tools like ramset type anchors, or an actual fire event that may require monitoring after the initial fire is extinguished for re-ignition. Hot work hazards can come in different forms, such as:

- Physical Hazards
- Chemical Hazards

It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to hot work safety and worker exposure to associated substances
- Safe work procedures including permit processes and post-work inspections
- Evaluation of incident response processes including fire suppression and emergency preparedness

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

810: HOT WORK SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to hot work safety
- Different types of hazards that are associated with hot work, such as:
  - Physical Hazards
    - Fire or explosion
    - Radiation
    - Noise
    - Vision
  - Chemical Hazards
    - Toxic fumes, vapours, or gases
    - Particulates
- How to identify hot work safety hazards and risks in a workplace
- Effective controls for hot work in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific hot work safety hazards and risks in a workplace
- Identify necessary changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing hot work safety hazards and risks
- Provide training in safe operating procedures for hot work safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the hot work safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for hot work safety
- Develop safety resources for newly introduced hot work safety or previously unidentified hazards or risks
- Develop and maintain a hot work safety management program

811: LOCKOUT AND DE-ENERGIZATION

Hazardous energy control describes the use of procedures, techniques, designs, and methods to protect workers from injury due to the inadvertent release of energy. Lockout is one way in which hazardous energy control can be achieved. Workers must be protected through achieving a zero-energy state whenever machinery or equipment is serviced or maintained. This is most often accomplished through lockout procedures. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to lockout and de-energization
- How zero-energy states are achieved

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

811: LOCKOUT AND DE-ENERGIZATION

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to lockout and de-energization
- Hazards and risks associated with hazardous energy
- Control mechanisms for different hazards
- What a Hazardous Energy Control Program is and what a lockout and de-energization program consists of
- Different mechanisms for achieving a zero-energy state, such as:
  - Bleeding
  - Blocking
  - Closing valves
  - Restraining

Apply and Analyze
Demonstrate ability to

- Install accessible lockout points for isolating energy sources
- Identify specific hazards requiring lockout and de-energization in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing hazards requiring lockout and de-energization hazards and risks
- Provide training in safe operating procedures for lockout and de-energization

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the lockout and de-energization management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for lockout and de-energization
- Develop safety resources for newly introduced hazards requiring lockout and de-energization or previously unidentified hazards or risks
- Develop and maintain a lockout and de-energization management program

812: MOBILE EQUIPMENT SAFETY

Mobile equipment, also referred to as Powered Mobile Equipment (PME), is defined as a self-propelled machine or combination of machines used to manipulate or move material, move workers, or provide a powered aerial device for workers. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to mobile equipment safety
- A basic understanding of the operation of the most common mobile equipment
- The requirements for the safe operation, inspection, and maintenance of mobile equipment in their workplace including load ratings, required protective guards (ROPS, FOPS, OPS, and TOPS), safeguarding moving parts, and de-energizing or locking out equipment.
- Safety requirements for riders, pedestrians, and equipment traffic

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

812: MOBILE EQUIPMENT SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to mobile equipment safety
- How to identify mobile equipment safety hazards and risks in a workplace
- The different types of mobile equipment in the workplace, basic structural components, basic function and the associated hazards and controls when using mobile equipment
- The basics of operation for the most common mobile equipment, such as:
  - Forklifts
  - Front End or Skid Steer Loader
  - Scissor and Boom Lift
- Safety requirements for riders, pedestrians, and equipment traffic
- The proper use of mobile equipment attachments and potential hazards associated with these attachments
- Effective controls for mobile equipment in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific mobile equipment safety hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge for new or changing mobile equipment hazards and risks
- Provide training in safe operating procedures for mobile equipment safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the mobile equipment safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for mobile equipment
- Develop safety resources for newly introduced mobile equipment safety or previously unidentified hazards or risks
- Develop and maintain a mobile equipment safety management program

813: OCCUPATIONAL HYGIENE

Occupational hygiene, also referred to as industrial hygiene, is the use of prevention strategies and technologies, monitoring, evaluation, and action planning to control hazards and risks in the workplace environment. Occupational hygiene encompasses many different aspects of safety in the workplace environment (e.g., indoor air quality, combustible dust, confined spaces, ergonomics, noise, radiation, toxic process safety).

The OHS professional in manufacturing should be familiar with industrial hygiene principles, including the recognition, evaluation and control of environmental stressors arising from the workplace that may result in injury, in order to prevent illness or impairment or affect the well-being of workers and members of the community. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to occupational hygiene
- The role of occupational hygiene in maintaining a safe working environment
- Hazard types (physical, chemical, biological, psychological) and associated risks

In the context of manufacturing, this can have unique implications for food processing plants that need to address occupational hygiene with respect to:

- Consumption of a produced product
- Managing animal waste
- Managing animal- or food-borne pathogens

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8, THSS5, THSS10, THSS11, THSS12 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

813: OCCUPATIONAL HYGIENE

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to occupational hygiene • How to identify occupational hygiene hazards in a workplace • Effective controls for occupational hygiene in the workplace
Apply and Analyze *Demonstrate ability to*	• Identify specific occupational hygiene hazards in a workplace • Identify opportunities for changes to workplace procedures or controls and make recommendations ◦ Communicate recommendations and their rationale to workers and managers • Maintain up-to-date knowledge of new or changing occupational hygiene hazards and risks • Provide training in safe operating procedures for occupational hygiene

Evaluate and Create *Demonstrate ability to*	• Conduct a hazard and risk assessment
	• Conduct a review of the occupational hygiene management processes in a workplace
	  ◦ Identify areas of excellence
	  ◦ Identify areas of (non)compliance
	  ◦ Identify opportunities for improvement
	• Conduct a training needs analysis
	• Develop workplace training for safe operating procedures for occupational hygiene
	• Develop safety resources for newly introduced occupational hygiene or previously unidentified hazards or risks
	• Develop and maintain an occupational hygiene management program

814: OVERHEAD CRANE AND HOIST SAFETY

Overhead cranes and hoists are a source of a wide variety of hazards and potentially severe risks. This category of hazard includes equipment such as:

- Lifting apparatus
- Cranes
- Conveyors
- Elevators
- Dumbwaiters
- Escalators and moving walks
- Manlifts

These hazards often relate to working at heights, but can also be hazards due to the risk of mechanical failure involving machinery failing or loads being dropped. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to overhead cranes and hoists
- Reading capacity ratings and load charts
- The basics of use and operation of cranes and hoists

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

814: OVERHEAD CRANE AND HOIST SAFETY

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to overhead cranes and hoists • How to read capacity ratings and load charts • How to identify hazards related to overhead cranes and hoists hazards in a workplace • Effective controls for hazards related to overhead cranes and hoists in the workplace
Apply and Analyze *Demonstrate ability to*	• Identify specific overhead cranes and hoists hazards in a workplace • Identify opportunities for changes to workplace procedures or controls and make recommendations ◦ Communicate recommendations and their rationale to workers and managers • Maintain up-to-date knowledge of new or changing overhead cranes and hoists hazards and risks • Provide training in safe operating procedures for overhead cranes and hoists

Evaluate and Create *Demonstrate ability to*	• Conduct a hazard and risk assessment
	• Conduct a review of the overhead cranes and hoists management processes in a workplace
	  ◦ Identify areas of excellence
	  ◦ Identify areas of (non)compliance
	  ◦ Identify opportunities for improvement
	• Conduct a training needs analysis
	• Develop workplace training for safe operating procedures for overhead cranes and hoists
	• Develop safety resources for newly introduced overhead cranes and hoists or previously unidentified hazards or risks
	• Develop and maintain an overhead cranes and hoists management program

815: RADIATION SAFETY: IONIZING RADIATION

Radiation as a workplace hazard comes in two forms: Ionizing and non-ionizing radiation. There are two main sources of ionizing radiation in manufacturing and food processing facilities, which are regulated differently:

- Radioactive material and radiation emitting devices
- X-ray emitting devices

It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

Both of these sources of ionizing radiation can present a serious health and safety risk if not properly controlled. In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to ionizing radiation
- Health effects of, and physical hazards from, exposure to ionizing radiation
- Identification of all sources of ionizing radiation through hazard identification and risk assessment

OHS professionals should also be familiar with the following:

- Identification of ionizing radiation emitting devices through hazard identification and risk assessment
- Management and control of hazards and risks for those working with or near ionizing radiation emitting devices including the use of engineering controls, administrative controls, and PPE selection
- Roles and responsibilities of management, Radiation Safety Officer (if required), operators and workers

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

815: RADIATION SAFETY: IONIZING RADIATION

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to ionizing radiation
- How to identify ionizing radiation hazards in a workplace
- Effective controls for ionizing radiation in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific ionizing radiation hazards in a workplace
- Identify necessary changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing ionizing radiation hazards and risks
- Provide training in safe operating procedures for ionizing radiation

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the ionizing radiation management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for ionizing radiation
- Develop safety resources for newly introduced ionizing radiation or previously unidentified hazards or risks
- Develop and maintain an ionizing radiation management program

816: RADIATION SAFETY: NON-IONIZING RADIATION

Radiation as a workplace hazard comes in two forms: Ionizing and non-ionizing radiation. There are two main sources of non-ionizing radiation in manufacturing and food processing facilities, which are regulated differently:

- Ultraviolet radiation (UVR)
- Lasers

It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

Both of these sources of non-ionizing radiation can present a serious health and safety risk if not properly controlled. In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to non-ionizing radiation
- Health effects of, and physical hazards from, exposure to non-ionizing radiation
- Identification of all sources of non-ionizing radiation through hazard identification and risk assessment

OHS professionals should also be familiar with the following:

- Identification of non-ionizing radiation emitting devices through hazard identification and risk assessment
- Management and control of hazards and risks for those working with or near non-ionizing radiation emitting devices including the use of engineering controls, administrative controls, and PPE selection
- Roles and responsibilities of management, Radiation Safety Officer (if required), operators and workers

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

816: RADIATION SAFETY: NON-IONIZING RADIATION

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to non-ionizing radiation
- How to identify non-ionizing radiation hazards in a workplace
- Effective controls for non-ionizing radiation in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific non-ionizing radiation hazards in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing non-ionizing radiation hazards and risks
- Provide training in safe operating procedures for non-ionizing radiation

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the non-ionizing radiation management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for non-ionizing radiation
- Develop safety resources for newly introduced non-ionizing radiation or previously unidentified hazards or risks
- Develop and maintain a non-ionizing radiation management program

817: SUPPLY CHAIN SAFETY

The manufacturing supply chain is a complex system. It ranges from the management of incoming raw materials, products, and supplies that are used in operations, the use of contractors or subcontractors, to the eventual delivery of products to the customer. OHS hazards and risks can be introduced to the workplace at various stages of the supply chain. Many materials, products, and supplies used in manufacturing operations are internationally sourced, making it important to understand import and export safety standards within the supply chain. It is important that the OHS professional understands the limits of their own knowledge and understands when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to supply chain safety
- The hazards and risks associated with complex supply chains
- Tools, resources, and procedures that can be used to mitigate risk

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge Institute for Occupational Safety and Health: 4.5

817: SUPPLY CHAIN SAFETY

Understand and Remember *Demonstrate understanding of*	• Relevant legislation, regulations, guidelines, and standards that pertain to supply chain safety • How to identify supply chain safety hazards and risks in a workplace • Effective controls for supply chain safety in the workplace
Apply and Analyze *Demonstrate ability to*	• Identify specific supply chain safety hazards and risks in a workplace • Identify opportunities for changes to workplace procedures or controls and make recommendations ◦ Communicate recommendations and their rationale to workers and managers • Maintain up-to-date knowledge of new or changing supply chain safety hazards and risks • Provide training in safe operating procedures for supply chain safety

Evaluate and Create *Demonstrate ability to*	• Conduct a hazard and risk assessment
	• Conduct a review of the supply chain safety management processes in a workplace
	  ◦ Identify areas of excellence
	  ◦ Identify areas of (non)compliance
	  ◦ Identify opportunities for improvement
	• Conduct a training needs analysis
	• Develop workplace training for safe operating procedures for supply chain safety
	• Develop safety resources for newly introduced supply chain safety or previously unidentified hazards or risks
	• Develop and maintain a supply chain safety management program

818: TOXIC PROCESS SAFETY

Toxic process safety is a component of occupational hygiene that can be defined as identifying, testing, and controlling hazards and risks to protect workers and facilities from any possible adverse reaction of chemicals or toxic gases due to mixing, blending, heating, cooling, and storing of materials in the course of manufacturing. The OHS professional will need to collaborate with Process Safety Specialists to arrive at solutions that can address both process safety and OHS risk. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to toxic chemical and gas safety
- Identifying the safety requirements of toxic materials and processes
- The importance of Occupational Exposure Limits, Biological Exposure Indices, and the Threshold Limit Values
- How to integrate toxic process safety requirements into the formal OHS management system

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8, HRCM6 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

818: TOXIC PROCESS SAFETY

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to toxic process safety
- Sources of safety information for toxic processes
- Key scientific principles regarding the action of toxic process hazards, such as:
  - Categories of hazardous substances
  - Potential sources of ignition
  - Various types of fire, explosion, and toxic effects
- How to identify specific hazards in the manufacturing, storage, transport, packing or other processes of the materials in a workplace
- The importance of effective consultations on safety issues between the OHS professional, operators, managers, and other relevant staff
- How to identify chemical process hazards in a workplace
- Effective controls for toxic processes in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific toxic process hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing toxic processes hazards and risks
- Provide training in safe operating procedures for toxic processes

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the toxic processes safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for toxic processes
- Develop safety resources for newly introduced toxic processes or previously unidentified hazards or risks

819: TRANSPORTATION AND WAREHOUSING SAFETY

Warehouses, docks, and the shipping and receiving yards are high OHS risk areas at manufacturing facilities. Beyond the property, there are driving risks for operators in both fleet owned and personally owned vehicles that are driven for company purposes. In this way, the workplace extends beyond the physical premises of a jobsite and encompasses the act of driving itself, wherever that may occur for work-related reasons. It is important that the OHS professional understands the limits of their own knowledge and understands when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, and standards that pertain to transportation
- Policies, best practices, and guidelines relating to transportation activities including dock and warehousing safety
- Hazard identification and control as it relates to preparing and readying materials or products for storage and shipment
- Fleet and grey fleet management and how it pertains to risk and the OHS management system

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

819: TRANSPORTATION AND WAREHOUSING SAFETY

Understand and Remember
Demonstrate understanding of

- Legislation, regulations, and standards that pertain to transportation activities including dock and warehousing safety
- Hazard and risk as it relates to shippers, receivers, other warehouse workers, transporters, and the general public
- How to identify transportation and warehousing safety hazards and risks in a workplace
- Effective controls for transportation and warehousing safety in the workplace

Apply and Analyze
Demonstrate ability to

- Identify specific transportation and warehousing safety hazards and risks in a workplace
- Identify opportunities for changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing transportation and warehousing safety hazards and risks
- Provide training in safe operating procedures for transportation and warehousing safety

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the transportation and warehousing safety management processes in a workplace
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for transportation and warehousing safety
- Develop safety resources for newly introduced transportation and warehousing safety or previously unidentified hazards or risks
- Develop and maintain a transportation and warehousing safety management program

820: WORKING ALONE OR IN ISOLATION

Working alone or in isolation refers to working in circumstances where assistance would not be readily available in the case of an emergency or in case the worker is injured or ill. This includes workers who drive alone (especially long distances), perform work in remote locations, work irregular hours, or any other form of isolation. Isolation can include visual (the worker cannot be seen) or auditory (the worker cannot be heard) isolation, even in the context of a worksite with other workers. These types of isolation can go unnoticed and create the risk of not being able to access help when needed. It is important that the OHS professional understands the limits of their own knowledge and recognizes when it is necessary to bring in additional expertise.

In order to act as an effective resource in their workplace, the OHS professional should be familiar with:

- Legislation, regulations, guidelines, and standards that pertain to working alone or in isolation
- The hazards and risks associated with working alone or in isolation
- Tools, resources, and procedures that can be used to mitigate risk
- Violence prevention

Prerequisites	Core Areas
References in other Frameworks	Board of Canadian Registered Safety Professionals: EPRF8 International Network of Safety & Health Professional Organisations: A5, B6, Occupational Health and Safety Body of Knowledge

820: WORKING ALONE OR IN ISOLATION

Understand and Remember
Demonstrate understanding of

- Relevant legislation, regulations, guidelines, and standards that pertain to working alone or in isolation safely
- How to identify hazards related to working alone or in isolation in a workplace
- Effective controls for working alone or in isolation safely in the workplace
- Violence prevention

Apply and Analyze
Demonstrate ability to

- Identify specific hazards related to working alone or in isolation in a workplace
- Identify necessary changes to workplace procedures or controls and make recommendations
  - Communicate recommendations and their rationale to workers and managers
- Maintain up-to-date knowledge of new or changing hazards related to working alone or in isolation
- Provide training in safe operating procedures for working alone or in isolation

Evaluate and Create
Demonstrate ability to

- Conduct a hazard and risk assessment
- Conduct a review of the workplace management processes for working alone or in isolation
  - Identify areas of excellence
  - Identify areas of (non)compliance
  - Identify opportunities for improvement
- Conduct a training needs analysis
- Develop workplace training for safe operating procedures for working alone or in isolation
- Develop safety resources for newly introduced or previously unidentified hazards or risks related to working alone or in isolation
- Develop and maintain a safety management program for working alone or in isolation

Acknowledgments

Input, advice, and guidance from the Steering Committee, Advisory Body, members, and subject matter experts engaged have been instrumental to the development of this *Competency Framework*. The Manufacturing Safety Alliance of BC would like to acknowledge their dedication and efforts and their continued support and contribution to this important initiative.

STEERING COMMITTEE REPRESENTATIVES

Chris Back
Director, OHS Consultation and Education Services, WorkSafeBC

Paul Barton
Secretary-Treasurer and Principal Officer, Teamsters Union Local 464

Scott Bax
Chief Operating Officer,
Pinnacle Renewable Energy Inc.

Lisa Chu
Dean, BCIT School of Health Sciences

James Donaldson
CEO, BC Food Processors Association

Lisa McGuire
CEO, Manufacturing Safety Alliance of BC

Sandra Oldfield
CEO, Elysian Projects Inc.

Daneen Skilling
National Environmental, Health and Safety Manager, Andrew Peller (Chair)

Wayne Tebb
Special Advisor, KPU School of Business

Kevin Thorburn
Senior Project Engineering Manager,
Nestle Waters Canada

Andrew Wynn-Williams
Divisional Vice President, BC,
Canadian Manufacturers and Exporters

Matthew Boddy
Program Manager, Ministry of Advanced Education, Skills and Training (Ex Officio)

ADVISORY BODY MEMBERS

Phil Bigelow PhD
Associate Professor, School of Public Health and Health Systems, University of Waterloo

Shelagh Campbell PhD
Associate Professor, University of Regina

Paul Carolan CRSP
Nunavut Employees Union

Laura Farmaner CRSP, CHSC
Portfolio Leader Production,
SAFE Work Manitoba

Warren Fox CRSP
OHS Instructor, British Columbia Institute of Technology (Retired)

Steve Horvath
Independent Consultant

Jason Longden P.Log
CEO, Fine Choice Foods Ltd.

Lisa McGuire CRSP, ICD.D
CEO, Manufacturing Safety Alliance of BC (Chair)

Erik Sherman
Director Injury Reduction, Training and COR, Alberta Motor Transport Association

Andrew Szeto PhD
Director, Mental Health Strategy & Associate Professor, University of Calgary

SUPPORTING PROJECT RESOURCES

Lucas Friesen
Research Analyst,
Manufacturing Safety Alliance of BC

Dale Johnson
Information Systems Manager,
Manufacturing Safety Alliance of BC

Graham Lowe PhD
Principal, The Graham Lowe Group

Jennifer Proby
Projects Manager,
Manufacturing Safety Alliance of BC

Bruno Zumbo PhD
Paragon UBC Professor of Psychometrics and Measurement

OTHER CONTRIBUTING SUBJECT MATTER EXPERTS

Wayne Arondus
COO, Manufacturing Safety Alliance of BC
and Instructor, BCIT School of Business

Curtis Caldwell PhD
President and Chief Scientist,
Radiation Science Research Consulting
and Training Inc.

Lorne Davies CRSP
Combustible Dust Specialist,
Manufacturing Safety Alliance of BC

Rosa Diaz CRSP, Industrial Engineer
Training and Development Manager,
Manufacturing Safety Alliance of BC

Roddy Govender
Senior Manager, Cyber Security, KPMG

Kelly Hogan CCPE
Director, Injury Prevention Services,
Sandalwood of Canada

Jasmine Kalsi MSc OEH, CRSP
Occupational Hygienist

Mark Lee
Partner, CapriCMW

Thomas Mehlhorn
Marketing Director,
ADI OtoSense™, Analog Devices

Ian Rood AScT, PTech, CHSC
Principal, UBSafe Inc.

Rob Selnes
Cyber Risk Advisor,
CapriCMW Insurance Services Ltd.

Hossein Sinaei P.Eng., CRSP
Machine Guarding and Industrial Racking
Specialist, Manufacturing Safety Alliance of BC

PRIMARY SOURCE DOCUMENTS

Blueprint for the Canadian Registered Safety Professional Examination (CRSPEX) (Board of Canadian Registered Safety Professionals, 2020)

Competency Framework: Professional standards for safety and health at work (Institution of Occupational Health and Safety, 2019)

The Occupational Health and Safety (OHS) Professional Capability Framework: A Global Framework for Practice. Knowledge matrix mapped to the OHS Body of Knowledge (Australian Institute of Health & Safety, 2017)

WorkSafeBC Occupational Health and Safety Regulations

About the Manufacturing Safety Alliance of BC

The Manufacturing Safety Alliance of BC provides confidential support to manufacturing and food processing companies throughout the province. Our goal is to assist members and clients by protecting workers, enhancing workplace health, improving safety management systems, and reducing related costs. We offer training, resources, and professional advisory services to help businesses become safer places to work.

manufacturing
Safety Alliance of BC

Learn more at safetyalliancebc.ca