

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



Sault College

**COURSE OUTLINE**

**COURSE TITLE:** Industrial Health & Safety  
**CODE NO. :** ENV102 **SEMESTER:** 1  
**PROGRAM:** Technology Programs  
**AUTHOR:** Cam Pucci – email: [campucci@shaw.ca](mailto:campucci@shaw.ca)  
**DATE:** Aug. 03 **PREVIOUS OUTLINE DATED:** Aug. 01  
**APPROVED:**

	_____	_____
	<b>DEAN</b>	<b>DATE</b>
<b>TOTAL CREDITS:</b>	2	
<b>PREREQUISITE(S):</b>	None	
<b>HOURS/WEEK:</b>	2	

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*For additional information, please contact Colin Kirkwood, Dean*  
*School of Technology, Skilled Trades & Natural Resources*  
*(705) 759-2554, Ext.688*

**I. COURSE DESCRIPTION:**

This is an introductory course for all those interested in industrial practices from the standpoint of industrial hygiene and industrial health and safety. The course looks at Provincial Legislation and related regulations that define industry and worker's rights and responsibilities. Recognition, evaluation and control methods, safe working practices, WHMIS, Confined Spaces, and Fire Safety are also included in this course.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Integrate health and safety procedures into the work environment.

Potential Elements of the Performance:

- Differentiate between the terms of health and safety
- Differentiate between accidents and injury
- List the function of an industrial hygienist
- List the four key elements of a successful health and safety program
- List and explain the causes of accidents and injuries
- Identify the major items that should be included in any safety policy
- Affirm why supervisors are the best persons to conduct accident investigations
- List and explain the rules for interviewing witnesses
- Work with the American Society of Safety Engineers Safety Audit
- Differentiate between sampling and monitoring

2. Relate legislative regulations from Occupational Health & Safety

Potential Elements of the Performance:

- explain the four basic rights that the Occupational Health and Safety Act gives to workers
- identify who is covered under the Occupational Health and Safety Act and who is not
- state when a joint health and safety committee is required to be established
- describe the make-up of a joint health and safety committee
- list and briefly explain the rights and responsibilities of joint health and safety committee members, employers, certified members and workers.

Potential Elements of the Performance Continued:

- explain the procedures and steps to be followed under the right to refuse work and the right to stop work.
- explain how WHMIS information is transmitted to workers
- name the six categories of controlled substances
- list and briefly explain the responsibilities of the supplier, the employer and the worker under WHMIS

## 3. Understand and demonstrate the ability to deal with hazards.

Potential Elements of the Performance:

- explain the steps in dealing with hazards
- list the factors that determine the degree of hazard
- differentiate between the terms hazardous and toxic
- differentiate between the terms acute and chronic
- define pertinent terms dealing with health hazards
- differentiate between the terms TLV-TWA, TLV-STEL and TLV-C.
- use the NFPA labeling system
- differentiate between the terms LEL and UEL
- carry out calculations for Industrial Hygiene, such as determining concentrations and time weighted average exposure
- identify physical hazards
- demonstrate a knowledge of the process by which noise is detected and interpreted
- indicate rules of thumb used to determine if there is excessive noise
- demonstrate a knowledge of methods used to relieve cold stress and heat strain

## 4. Introduce methods of control, which will reduce exposure to hazards.

Potential Elements of the Performance:

- identify work practices and controls that can reduce exposure levels
- identify different types of personal protective devices used to minimize exposure to hazards
- define general ventilation and calculate requirements to maintain safe working environments
- define local ventilation and calculate air flows through and around local ventilation sites

Potential Elements of the Performance Continued.....

- list and briefly explain the main components of a local exhaust system
- list the main design criteria for ventilation ducts
- differentiate between a quantitative and a qualitative respirator fit test

**III. TOPICS:**

1. Introduction to Engineering Safety
2. Legislative and Related Regulations
3. Chemical and Physical Hazards
4. Safe Work Practices
5. Respiratory Protection
6. WHMIS
7. Confined Spaces
8. Fire Safety

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Industrial Health and Safety Study Guide  
Occupational H&S Act (Green Book)

**V. EVALUATION PROCESS/GRADING SYSTEM:**

*Activities and Assignments: 40 % Tests/ 40% Attendance  
20% WHMIS Certification*

*In order for a student to be certified in WHMIS, the student must receive a minimum grade of 70% on the WHMIS final.*

The following semester grades will be assigned to students in postsecondary courses:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	3.75
B	70 - 79%	3.00
C	60 - 69%	2.00
F (Fail)	59% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

## VI. SPECIAL NOTES:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1204 or call Extension 493 so that support services can be arranged for you.

### Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

### Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

**SPECIAL NOTES CONTINUED.....**Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.