

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

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COURSE TITLE: FIRE SAFETY


CODE NO.: LAS322 SEMESTER: TWO

PROGRAM: LAW AND SECURITY ADMINISTRATION

AUTHOR: BOB ROBINSON

DATE: JANUARY. 1995 PREVIOUS OUTLINE DATED: JANUARY. 1994

NEW: REVISED: X

APPROVED: 
 K. DeRosario, Dean
 School of Human Sciences
 and Teacher Education

Date/ 7

****NOTE: Do not discard this outline. It will be required by other educational institutions if you are attempting to obtain credit for this course.**

COURSE PHILOSOPHY & GOALS

Fire proves every day that everyone in every role needs to know its hazards and how to prevent it, to save lives, property and money. It's difficult to exaggerate the perils of fire, because fire, mishandled or out of control, is a horrible threat that stalks all of us in our daily lives, at home and at work. This course will teach the student the elements of fire and how to control and extinguish fire. The student will learn the four classes of fire and most of all, learn fire prevention at home and work.

This course will be presented in ten modules. The course modules are listed in order in which they should be completed by the student. Further details of each module can be found in the following pages.

Module	Topic	Hours
	Intro and Orientation	1 hr
1	Facts About Fire	2 hrs
2	Anatomy & Behaviour of Fire	2 hrs
2	Flammable Liquids	2 hrs
4	Flammable Gases	4 hrs
5	Electrical Fires & Accidents	2 hrs
6	Home Fire Prevention	4 hrs
7	Industrial Fire Prevention	2 hrs
8	Hand Portable Fire Extinguishers	2 hrs
9	Self Contained Breathing Apparatus	2 hrs
10	Fire Protection Systems	4 hrs

REQUIRED STUDENT RESOURCES

Industrial Fire Protection, First Edition
Handouts Provided by Course Instructor

METHOD OF EVALUATION

Students will be evaluated through assignments and tests. Overall grade of course will be calculated on a total of 300 points. These points will be achieved by the following evaluation method:

1. Mid-Term Exam	100 points
2. Two Quizzes, 25 points each	50 points
3. One Assignment	50 points
4. Final Exam,	100 points
	300 points

SAULT COLLEGE GRADING POLICY

A+ = 90 - 100
A = 80 - 89
B = 70 - 79
C = 60 - 69
R = below 60 (repeat course)

SPECIAL NEEDS NOTE

Students with special needs (eg. Physical limitation, visual impairments, learning impairments) are encouraged to discuss required accommodations confidentially with the instructor.

You instructor reserves the right to modify the course as he deems necessary to meet the needs of the students.

COURSE SYLLABUS

Upon successful completion of the following modules, the student will have demonstrated an ability to:

Module One

Understand the four elements of fire which are the fire tetrahedron.

- 1.1 Heat
- 1.2 Fuel
- 1.3 Oxygen
- 1.4 Chemical Reaction

Module Two

Understand the chemistry of fire.

- 2.1 FlashPoint
- 2.2 Fire Point
- 2.3 Ignition Temperature
- 2.4 Flashover
- 2.5 Back Draft

Module Three

Understand the characteristics of flammable liquids:

- 3.1 Vapor Weight
- 3.2 Colour or Odor
- 3.3 Specific Gravity
- 3.4 Explosive Range
- 3.5 Safe Handling and Storage of Flammable Liquids Especially Gasoline

Module Four

Understand the characteristics of flammable gases:

- 4.1 Explosive Range
- 4.2 Vapor Weight
- 4.3 Odor
- 4.4 Bleve
- 4.5 Safe Handling of Flammable Gases Especially Propane

Module **Five**

Understand the leading causes of electrical fires and accidents, especially in the home:

- 5.1 Over-Loaded Circuits
- 5.2 Improper Fusing
- 5.3 Old and Tired Electrical Equipment
- 5.4 Preventative Methods to Stop Senseless Electrical Accidents

Module **Six**

Survive and prevent home fires:

- 6.1 Leading Causes of Death due to Fires in the Home
- 6.2 Leading Causes of Fires in Sault Ste. Marie Homes
- 6.3 Design a Good Home Prevention Plan
- 6.4 Know How to Handle Themselves in Fire Situations

Module **Seven**

Understand the need for fire prevention in the workplace:

- 7.1 The Four Leading Causes of Industrial Fire
- 7.2 The Benefits of a Good Fire Prevention Program
- 7.3 Emergency Action Plan in the Work Place

Module **Eight**

Understand the need for fire extinguishers as the first line of defence on any fire:

- 8.1 Various Types of Fire Extinguishers
- 8.2 How to Operate
- 8.3 How to Apply Agent in the Extinguisher on to the Fire
- 8.4 Capabilities of Fire Extinguishers
- 8.5 How to Properly Inspect Extinguishers at Home and Work

Module **Nine**

The need for self-contained breathing apparatus in hostile environments:

- 9.1 Types of Hostile Environments
- 9.2 Major Components of a SCBA unit
- 9.3 How the Unit Functions
- 9.4 Donning Procedures

Module **Ten**

Understand that properly maintained fire protection systems can save lives and reduce fire loss

- 10.1 Automatic Sprinkler Systems
 - a. wet
 - b. dry
 - c. deluge
- 10.2 Sprinkler System Components
- 10.3 Gas Fire Suppression Systems
 - a. Halon 1301
 - b. Carbon Dioxide
- 10.4 Hands-On Inspection of Fire Systems at Algoma Steel Inc.