

# CANADIAN FIRE ALARM TECHNOLOGY PROGRAM

## CURRICULUM

### 5 REQUISITE COURSES FOR REGISTRATION AS A FIRE ALARM TECHNICIAN

#### COURSE 1 | **THE CANADIAN FIRE ALARM SYSTEM - AN OVERVIEW**

THIS COURSE PROVIDES A GENERAL UNDERSTANDING OF FIRE ALARM PROTECTION SYSTEMS. IT DISCUSSES THE PURPOSE AND SPECIFIC APPLICATION OF THE CODES AND STANDARDS THAT REGULATE THE INDUSTRY. IT INTRODUCES THE STUDENT TO ARCHITECTURAL CONSIDERATIONS REGARDING FIRE CONTAINMENT. INFORMATION ABOUT TESTING LABORATORIES, THEIR PROCEDURES, TESTING METHODS AND HOW LISTED/APPROVED MATERIALS ACHIEVE GREATER DEGREES OF LIFE SAFETY WILL BE COVERED. OTHER TOPICS INCLUDE: THE NATURE OF FIRE, EXTINGUISHMENT METHODS, FIRE ALARM TESTING METHODS, INTERPRETATION OF DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

TEXTBOOK: CANADIAN FIRE ALARM ASSOCIATION: *THE CANADIAN FIRE ALARM SYSTEM - A REFERENCE MANUAL*, 2017, 1ST EDITION. (CFAA, 2017)

#### COURSE 2 | **VERBAL AND WRITTEN COMMUNICATIONS**

THIS COURSE INTRODUCES THE STUDENT TO VARIOUS FORMS OF VERBAL AND WRITTEN BUSINESS COMMUNICATION INCLUDING LETTER, MEMORANDA, SUMMARIES, AND INSTRUCTION. IT TEACHES PRACTICAL TECHNIQUES FOR PLANNING AND WRITING REPORTS IN AN EFFECTIVE, PROFESSIONAL MANNER. EDITING, SPELLING, GRAMMAR AND PUNCTUATION ARE INCORPORATED INTO THE COURSE. BY PERFORMING IN-CLASS ASSIGNMENTS THE STUDENT WILL LEARN TO PRESENT ORAL REPORTS PROFESSIONALLY AND TO WRITE EFFECTIVELY.

TEXTBOOK: NORTHEY, MARGARET, AND JANA SEIJTS: *IMPACT!: A GUIDE TO BUSINESS COMMUNICATION* (PEARSON EDUCATION CANADA, 2018)

## COURSE 3 | **BASIC ELECTRICITY**

BASIC ELECTRICITY THEORY - OHM'S LAW, KIRCHHOFF'S LAW, MAGNETISM, ENERGY GENERATION AND THE DANGERS OF HIGHER A/C VOLTAGES.

CANADIAN ELECTRICAL CODE WITH REFERENCE TO THE FOLLOWING AREAS:

- CONDUCTORS: SIZING, INSULATION TYPES, VOLTAGE RATINGS AND OTHER CONDUCTOR CHARACTERISTICS
- HOW TO ACCESS THE TABLES REGARDING CONDUCTORS AND CABLES (I.E. TABLE 11,19 AND D1)
- GROUNDING OF CONDUIT SYSTEMS AND ENCLOSURES-SECTION 10
- WIRING METHODS, CONDUIT AND CABLE INSTALLATION
- PROTECTION AND CONTROL OF ELECTRICAL CIRCUITS-OVERCURRENT PROTECTION (FUSES & BREAKERS)
- DISCONNECTING MEANS, CLASS 1 & 2 CIRCUITS- SECTION 14, AND
- ALL REQUIREMENTS PERTAINING TO FIRE ALARM SYSTEMS-SECTION 32 & 60

TEXTBOOK: CANADIAN FIRE ALARM ASSOCIATION: *BASIC ELECTRICAL THEORY FOR THE FIRE ALARM TECHNICIAN*, 2003 EDITION. (CFAA, 2003)

## COURSE 4 | **LIFE SAFETY SYSTEMS ELECTRONICS**

STUDY THE PRINCIPLES OF ELECTRONICS AS THEY APPLY TO LIFE SAFETY SYSTEMS, INCLUDING FIRE ALARMS AND BUILDING AUTOMATION SYSTEMS. EXAMINE BOTH ANALOGUE AND DIGITAL SYSTEMS AND THEIR APPLICATIONS. THIS IS A VALUABLE COURSE FOR ALL THOSE WHO WORK (OR ARE PLANNING TO ENTER) INDUSTRIES RELATED TO THE BUILT ENVIRONMENT.

TEXTBOOK: CANADIAN FIRE ALARM ASSOCIATION: *LIFE SAFETY SYSTEM ELECTRONICS*, (CFAA, 2012)

## COURSE 5 | **THE CANADIAN FIRE ALARM SYSTEM- APPLICATION**

APPLICATIONS OF FIRE ALARM SYSTEMS, OPERATION, TESTING AND INSPECTION REQUIREMENTS OUTLINED BY THE VARIOUS CODES AND STANDARDS ARE COVERED AT A MORE DETAILED LEVEL. ALSO COVERED ARE PRINCIPLES AND TECHNOLOGY OF FIRE DETECTION DEVICES, SIGNAL APPLIANCES, CONTROL EQUIPMENT AND ANCILLARY DEVICES CONTROLLED BY THE SYSTEM. THE STUDENT WILL LEARN TRADITIONAL FIELD WIRING CIRCUITS, THE CONNECTION OF FIELD DEVICES, BASICS OF MICROPROCESSOR BASED SYSTEMS USING ADDRESSABLE DEVICES AND REMOTE ANNUNCIATION. OTHER LIFE SAFETY SUPPORT SYSTEMS SUCH AS SMOKE CONTROL AND ELEVATOR RECALL WILL ALSO BE DISCUSSED.

TEXTBOOK: CANADIAN FIRE ALARM ASSOCIATION: *THE CANADIAN FIRE ALARM SYSTEM - A REFERENCE MANUAL*, 2017, 1ST EDITION. (CFAA, 2017)