

I. COURSE DESCRIPTION:

This course introduces the student to electrical installation methods for Monitoring and Communication Systems. Corresponding sections of the Canadian Electrical Code and the Canadian Building Code are covered in conjunction with ULC Standards relating to installation, inspection, testing and verification of Fire Alarm Systems.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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

1. Interpret the Canadian Electrical Code (CEC), National Building Code and ULC requirements pertaining to Fire Alarm Systems.

Potential Elements of the Performance:

- Describe the principles of operation and installation requirements of single stage, two stage, initiation and supervisory circuits.
- Describe the principles of operation and installation requirements for pull stations, detectors, flow switches, bells, speakers, addressable initiating devices and sprinkler supervisory devices.
- Describe the principles of operation and installation requirements of speaker and ancillary relay circuits, annunciators and emergency phones.
- Describe the basic operation of wet and dry sprinkler systems.
- Describe the uses and dangers of fire suppression agents, the components and systems used for their installation in suppression systems.
- Describe the principles of operation of institutional clock systems.
- List the ULC standard for the installation, inspection, testing and verification of Fire Alarm Systems.

- Use the Canadian Building Code to determine the installation requirements for fire alarm systems and related equipment.
- Demonstrate the installation, troubleshooting and testing of initiation and supervisory circuits and devices including two stage initiator wiring.
- Demonstrate the installation, troubleshooting and testing of speaker and ancillary relay circuits, annunciators and emergency phones.
- Demonstrate the installation, operation and testing of alarm panels with respect to lights and lamps, power supplies, overcurrent devices, ground fault indicators, annunciator panels and common trouble functions.
- Connect intrusion systems and devices.
- Connect the wiring and operation of nurse call systems.
- Connect paging and communications systems.
- Describe the principles of operation and installation requirements for common home automation systems.
- Describe the methods used to install, terminate, and test fibre optic cables.

III. TOPICS:

1. Monitoring and Communication Systems.

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Ontario Electrical Safety Code (current edition) or Canadian Electrical Code Part 1 (Current Edition)
- Electrical Wiring Commercial (Current Canadian Edition published by Delmar)

V. EVALUATION PROCESS/GRADING SYSTEM:

Assigned Questions	20%
2 Tests	50%
Shop activities and associated reports:	30%

While marks are not given for attendance, marks may be deducted for classes missed. See Special Notes section.

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

Grade	<u>Definition</u>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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 professor and/or the Special Needs office. Visit Room E1101 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.

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.

If a student misses a test or a lab he/she must have a valid reason (i.e. medical or family emergency – documentation will be required). In addition, the instructor **must** be notified **prior** to the test sitting or lab class. If this procedure is not followed the student will receive a mark of zero on the test or lab with no make-up option.

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.