COURSE OUTLINE: ELR823 - CANAD.ELECT.CODE 3

Prepared: Sasha Coleman
Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	ELR823: CANADIAN ELECTRICAL CODE - LEVEL 3
Program Number: Name	6522: CONST & MTCE ELE ADV
Department:	ELEC. APPRENTICES
Semesters/Terms:	21W, 20F, 20F
Course Description:	This course is a continuation of ELR623 and ELR723, Canadian Electrical Code Level I and II. The primary focus will be on code sections relating to industrial wiring practices.
Total Credits:	3
Hours/Week:	3
Total Hours:	30
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	EVALUATION PROCESS/GRADING SYSTEM: 3 or 4 equally weighted tests: 100%

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

*See special notes.

The following semester grades will be assigned to students:

Grade
Definition Grade Point Equivalent
A+ 90 - 100% 4.00
A 80 - 89%
B 70 - 79% 3.00
C 60 - 69% 2.00
D 50 - 59% 1.00
F (Fail)49% 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.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Interpret the Canadian Electrical Code (CEC) requirements pertaining to industrial installations.	• Interpret the CEC regulations associated with the installation of two or more continuous and non-continuous duty service motors on a branch circuit or feeder including conductor size and overcurrent device sizes (Section 28). • Interpret the CEC regulations associated with the installation of a hermetic refrigerant motor-compressor on a branch circuit including conductor size, overload size, and overcurrent device size (Section 28). • Interpret the CEC regulations regarding the installation of reduced voltage starters including overload size, and overcurrent device size. • Calculate tap conductor size for motor and compressor branch circuits. • Interpret the CEC regulations associated with the installation of transformers including dry type and liquid-filled (Section26). • Calculate minimum conductor size and maximum overcurrent protection for individual power and distribution transformers including dry-type, liquid-filled, high-voltage and low-voltage on a circuit (Section 26). • Calculate minimum conductor size and maximum overcurrent for more than one power and distribution

		transformer including dry-type, liquid-filled, high-voltage and low-voltage on a feeder or branch circuit (Section 26). • Interpret the CEC regulations regarding welders (Section 42). • Calculate the minimum conductor size and the maximum overcurrent protection for individual resistance and transformer type welders (Section 42). • Calculate the minimum conductor size and the maximum overcurrent protection for more than one resistance and/or transformer type welder on a circuit (Section 42). • Interpret the CEC regulations for the installation of capacitors (Section 26). • Calculate the minimum conductor size, maximum overcurrent device size and disconnecting means size for capacitors (Section 26). • Interpret the CEC regulations for placing capacitors in motor circuits (Section 26). • Select overcurrent devices based on voltage, continuous load, and maximum current interrupting ratings as per manufacturer`s specifications, CEC and customer`s requirements. • Interpret the CEC regulations associated with high voltage installations including wiring methods, grounding and bonding (Section36)
Date:	August 18, 2020	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	