



COURSE OUTLINE: ELR825 - PRINTS - LEVEL 3

Prepared: Sean Hager

Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	ELR825: PRINTS - LEVEL 3
Program Number: Name	6522: CONST & MTCE ELE ADV
Department:	ELEC. APPRENTICES
Semesters/Terms:	21W, 20F, 19W
Course Description:	This course covers interpretation of construction drawings and specifications relating to industrial construction projects. It focuses on the electrical installation.
Total Credits:	3
Hours/Week:	2
Total Hours:	20
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:	<p>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.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>
Course Evaluation:	<p>Passing Grade: 50%, D</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>
Other Course Evaluation & Assessment Requirements:	<p>Grade Definition Grade Point Equivalent</p> <p>A+ 90 - 100% 4.00</p> <p>A 80 - 89%</p> <p>B 70 - 79% 3.00</p> <p>C 60 - 69% 2.00</p> <p>D 50 - 59% 1.00</p> <p>F (Fail) 49% and below 0.00</p> <p>CR (Credit) Credit for diploma requirements has been awarded.</p> <p>S Satisfactory achievement in field /clinical placement or non-graded subject area.</p> <p>U Unsatisfactory achievement in field/clinical placement or non-graded subject area.</p> <p>X A temporary grade limited to situations with extenuating circumstances giving a student</p>

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.



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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 W Student has withdrawn from the course without academic penalty.

Books and Required Resources:

Canadian Electrical Code
 Publisher: CSA Group or PS Knight Edition: current

 Electrical Wiring Industrial Canadian Edition
 Publisher: Delmar

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
<p>Interpret the Canadian Electrical Code requirements pertaining to industrial installations.</p>	<p>Use architectural, electrical, and mechanical drawings and specifications to determine installation requirements for a construction project.</p> <p>Read and develop complex single line, schematic and wiring diagrams.</p> <p>Identify the standards for IEC, NEMA, and EEMAC rated starters and contactors as per manufacturer's specifications.</p> <p>Use plans to design branch circuit layouts for single phase and three phase systems from panels to the points of utilization, employing load balancing techniques.</p> <p>Complete a cable pulling calculation to determine the stresses on the conductor/cable during installation.</p> <p>Prepare branch circuit, feeder, and bus duct electrical estimates, using the drawings, for construction installations, and transfer the information to material order sheets.</p> <p>Complete an electrical system design from the point of utility supply, emergency supplies and transfers, to a panel board and associated loads including transformers, feeders, bus duct, splitters, disconnects, capacitors and motors, applying Code rules.</p> <p>Complete the grounding and bonding requirements for a high voltage substation installation including indoor and outdoor substations and electrical vaults.</p> <p>State the precautions necessary for the installation of a stress cone.</p> <p>Describe the preparation and termination of shielded high voltage cables.</p> <p>Describe the preparation and termination of concentric neutral high voltage cables.</p> <p>Describe the testing methods for high voltage cables and identify all applicable safety requirements.</p>

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Select overcurrent devices to ensure proper overcurrent coordination as per manufacturer` s specifications, CEC and customer` s requirements.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Tests (2)	100%

Date:

August 18, 2020

Addendum:

Please refer to the course outline addendum on the Learning Management System for further information.

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