



COURSE OUTLINE

ELR825

Prepared: Chris Kelly Approved: Corey Meunier

Course Code: Title	ELR825: PRINTS - LEVEL 3				
Program Number: Name	6522: CONST & MTCE ELE ADV				
Department:	ELEC. APPRENTICES				
Semester/Term:	18W				
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				
Course Evaluation:	Passing Grade: 50%, D				
Other Course Evaluation & Assessment Requirements:	<p>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</p> <p>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 W Student has withdrawn from the course without academic penalty.</p>				
Evaluation Process and Grading System:	<table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <tr> <td>Tests (2)</td> <td>100%</td> </tr> </tbody> </table>	Evaluation Type	Evaluation Weight	Tests (2)	100%
Evaluation Type	Evaluation Weight				
Tests (2)	100%				
Books and Required	Canadian Electrical Code				

Resources:

Publisher: CSA Group Edition: 2015 Edition

Electrical Wiring Industrial
Publisher: Delmar

Course Outcomes and Learning Objectives:**Course Outcome 1.**

Interpret the Canadian Electrical Code requirements pertaining to industrial installations.

Learning Objectives 1.

Use architectural, electrical, and mechanical drawings and specifications to determine installation requirements for a construction project.

Read and develop complex single line, schematic and wiring diagrams.

Identify the standards for IEC, NEMA, and EEMAC rated starters and contactors as per manufacturer's specifications.

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.

Complete a cable pulling calculation to determine the stresses on the conductor/cable during installation.

Prepare branch circuit, feeder, and bus duct electrical estimates, using the drawings, for construction installations, and transfer the information to material order sheets.

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.

Complete the grounding and bonding requirements for a high voltage substation installation including indoor and outdoor substations and electrical vaults.

State the precautions necessary for the installation of a stress cone.

Describe the preparation and termination of shielded high voltage cables.

Describe the preparation and termination of concentric neutral high voltage cables.

Describe the testing methods for high voltage cables and identify all applicable safety requirements.

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

Date:

Wednesday, February 28, 2018

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