

Week	Outcomes	Format	Hours	Topic/Content	Readings	Assignments	Assessment	Resources
1-4	1, 2	Lecture	8	Review Canadian Electrical Code Review Intro. to Residential Electrical installations code (HMI111)	Units 3,4 (services Code sec. 6)	Handout / teacher's resources (for review)	Review quiz Assign. to be handed in	Canadian Electrical Code Book (CEC), Residential Electrical Wiring
				<u>Describe</u>				
				Objective, scope and general arrangement of the Canadian electrical code.				
				<u>Identify</u>				
				Determine service entrance sizes, conductors and service disconnecting means.				
	1,2,3	Lab	8	<u>Apply</u>				
				Prepare a layout drawing for a service mast and indicate the procedure for installation, including underground and stack installations	Code sec. 6	Lab Assignmt #1 and 2	Assign. to be handed in	
5-8	1,2	Lecture	8	<u>Explain</u> Canadian electrical code for residential installation.	Unit 10-11 Pg. 185-211 Section 6	Pg. 194 Ques. 1-9	To be handed in Week 5 review / test	CEC, Residential Electrical Wiring
				Complete and electrical system design from the point of utility supply, emergency supply and transfers to a panel board.	Sect. 26-400 Sect. 6, 8			

				<u>Explain</u>				
				Grounding and bonding.				
				Circuits operating at 750 volts or less (section 10).				
				Branch circuits (review)				
				<u>Identify</u>				
				Determine the maximum number of outlets allowed per circuit.				
				<u>Explain</u>				
				CEC regulations regarding grounding and bonding (Sect. 10) of electrical systems and circuits operating at 750 volts or less.	Sect. 8-304			
				Ground faults circuit interrupters, arc fault circuit interrupters, surge suppressors and isolated ground receptacles.	Sect. 26 Unit 9 Pg. 165-180	Ques. 1-23 Pg. 181	Assign. to be handed in	
				<u>Explain</u>				
				Operation and connection of GFCIs.				
				Why GFCIs are required.				
				Installation of GFCIs and AFCIs				
				<u>Identify</u>				
				Locations of GFCIs and AFCIs.				
				The theory of ground fault.				
	1,2,3	Lab	4	<u>Apply</u>				
				Continue the layout and installation procedure for mast installations	Code sec. 6	Lab Assignmt #3	Assign. to be handed in	
				Calculate conduit fill for same size conduit and insulation type.				
				Calculate conduit fill for different sizes and insulation type.				

				Calculate raceway fill types (section 12)	Ref. Unit 12 Pg. 220-233	Pg. 257 Ques. 1-24	To be handed in	Residential Electrical Wiring
				Calculate raceway fill for different sizes and insulation type (section 12).				
				Calculate number of conductors size 14 to 6 that are permitted in a box.				
				Calculate the minimum size of pull boxes, straight, angled and u-pulls larger than a number 6.				
				Calculate ampacity, factors for single conductors in free air, including conductors in parallel.				
			4	Demonstrate wiring of ground fault receptacles, ground fault breakers and arc fault breakers.		Lab Assignmt #4	To be handed in	
8-9-10	1, 2	Lecture	6	<u>Explain</u> Specifications and drawings	Unit 13 Pg. 237-246. Section 8	Pg. 246 Ques. 1-3, 1-11, 1-8.	To be handed in Week 10 review / test	CEC and Residential Electrical Wiring
				State procedures for inspecting an installation by appropriate authority.				
				Specifications, building and electrical codes (CEC)				
				<u>Identify</u>				
				Alpha-numerical lines.				
	1,2,3	Lab	6	<u>Apply</u>				
				Layout and install receptacles including split receptacles and split switched receptacles		Lab Assignmt #5	To be handed in	

				Competency with metric and Imperial scales.				
				Convert between the two.				
				Residential specifications.				
				Using a set of drawings of a single dwelling, apply information from the architectural, structural and mechanical drawings.				
				Draw and label a panel schematic.				
				Prepare an electrical material take-off.				
11-12	1,2,3	Lecture	4	<u>Explain</u> Special purpose outlets	Unit 15 Pg. 262-271	Pg. 271 Ques. 1-10, 1-8, 1-8, 1-10	To be handed in	CEC, Residential Electrical Wiring
				<u>Identify</u>				
				Electrical plans and special installations.				
				Infinite heat temperature controls.				
				How to install a feeder and divide a feeder into individual circuits.				
	1,2,3	Lab	4	<u>Apply</u> Demonstrate installation methods for non-metallic sheath cable and armoured cable (BX)		Lab Assignmt #6	To be handed in	
				Compute demand factors for ranges, wall mounted ovens, etc.				
				Select proper conductor sizes.				
				Ground all appliances properly.				
				Install circuits for dishwashers and waste disposals in compliance with CEC.				

13-14-15		Lecture	6	<u>Describe</u> Branch circuits for laundry, washroom and attic	Unit 16 Pg. 276-287 Section 10	Pg. 387 Ques. 1-14, 1-12	To be handed in Week 15 Review / test # 3	CEC, Residential Electrical Wiring
				CEC requirements for receptacle outlets.				
				Discuss the CEC rules pertaining to attics.				
		Lab	6	<u>Apply</u>				
				Demonstrate installation of EMT and PVC conduit		Lab Assignmt #7	To be handed in	
				Proper wiring and grounding connections for large appliances.				
				Various wiring methods.				
				Proper way to connect pilot lights and pilot light switches.				
16				Review.				