CORE COMPETENCIES
(154 Hours)

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration
1. Perform roughing-in, wiring and cabling works for single-phase distribution, power, lighting and auxiliary systems	1.1 Install electrical metallic /non-metallic (PVC conduit)	• Interpret electrical wiring diagrams and mechanical drawings • Identify proper usage and types of conduits, fittings in electrical installation. • Identify technique of installation and bending of conduit and fitting. • Apply proper usage of safety harness. • Interpret plan and details drawing. • Practice proper handling of materials, tools and equipment • Practice procedure in proper bending of conduits • Practice procedure in Installing conduits • Perform the installation economically	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	16 hours
	1.2 Install wire ways and cable tray	• Identify use of materials, tools and equipment • Interpret electrical/mechanical drawing • Determine suitability for installation and used of bus way, cable tray, fittings and panels, conformity with the provision of the PEC Code. • Practice wire way and cable tray installation • Practice proper use of safety harness (PPE) • Interpret technical plan • Use effective communication skills (written and oral) • Practice effective use of measuring tape • Perform the installation economically	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	16 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration
	1.3 Install auxiliary terminal cabinet and distribution panel	• Learn and apply mensuration • Determine blue print reading and materials specification. • Read proper proofing standards • Perform proper procedure in installation of auxiliary terminal cabinet and distribution panel. • Apply proper use of safety harness (PPE). • Interpret technical plan • Practice effective use of measuring devices • Practice proper handling of tools and equipment • Install terminal cabinet and distribution panel • Perform the installation economically.	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	12 hours
	1.4 Prepare for cable pulling and installation	• Read and familiarize: o mensuration o blue print reading and materials specification. o uses of wires, cables and tools o required sizes of cable based on PEC Wire Table • Prepare cable for installation • Interpret technical plan and drawing. • Practice effective use of measuring tapes • Practice proper handling of tools and equipment • Apply methods and techniques in various type of wiring wires and cables.	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Practical Lab/ Exercises	6 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration
	1.5 Perform wiring and cabling lay out	• Read and familiarize: o Mensuration o Blue print reading and materials specification o Application of pulling compound o Methods in cable pulling • Interpret technical plan and drawing. • Apply methods in cable pulling • Follow procedures in bending radius and loop tolerances for cables.	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • Group discussion • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	16 hours
	1.6 Notify completion of work	• Describe processes, Operations Systems - Maintenance of tools & materials - Storage of tools • Check and conform the installation based on job requirement • Practice good housekeeping. • Perform commissioning activities	• Lecture • Demonstration • Modular (self-paced) • Group discussion	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Practical Lab/ Exercises	4 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration

2. Install electrical protective devices for distribution, power, lighting, auxiliary, lightning protection and grounding systems	2.1 Plan and prepare work	• Read and familiarize:
		  ○ Types of protective devices and its applications
		  ○ Identification of standard drawing based on standard (ANSI or IEC)
		  ○ Protective devices specifications and ratings
		• Interpret plans & detail drawing
		• Describe proper handling of materials, tools and equipment
		• Check and quantify item as needed in the job requirement
		• Apply active and non-active test to ensure its functionality of the devices.
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
			• PowerPoint/Video presentation
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
					8 hours

	2.2 Install electrical protective devices	• Read and familiarize:
		  ○ Guidelines Governing Occupational Safety and Health in the Construction Industry.
		  ○ Types and usage of different electrical protective devices
		• Perform procedures for installation of electrical protective devices
		• Perform selection of electrical protective devices as per job requirements
		• Practice good housekeeping
		• Apply methods and techniques in various types of protective devices and lightning protection and grounding systems
		• Terminate and mount devices.
		• Check and conform the installation based on job requirement
		• Perform the installation economically.
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
			• PowerPoint/Video presentation
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
				• Project method
				• Practical Lab/ Exercises
					16 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration

	2.3 Install lighting fixture and auxiliary outlet	• Read and familiarize:
		  ○ Guidelines Governing Occupational Safety and Health in the Construction Industry.
		  ○ Types and usage of different lighting fixture and auxiliary outlet
		• Perform procedures for installation of lighting fixture and auxiliary outlet
		• Perform selection of lighting fixture and auxiliary outlet as per job requirements
		• Practice good housekeeping
		• Interpret plans and details
		• Practice proper handling of materials, tools and equipment
		• Apply methods and techniques in various types of lighting fixture and auxiliary outlet
		• Check and conforming the installation based on job requirement
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
			• PowerPoint/Video presentation
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
				• Project method
				• Practical Lab/ Exercises
					16 hours

	2.4 Notify completion of work	• Describe Processes, Operations Systems
		  ○ Maintenance of tools & materials
		  ○ Storage of tools
		• Check and conform the installation based on job requirement
		• Practice good housekeeping.
		• Perform commissioning activities
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
				• Practical Lab/ Exercises
					4 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration
3. Install wiring devices of floor and wall mounted outlets, lighting fixtures/switches and auxiliary outlets	3.1 Select wiring devices	• Determine materials specification • Identify types and usage of electrical wiring devices and consumable items • Interpret electrical drawing and wiring diagram. • Describe function of every devices used in the line/job requirements • Check and quantify the item needed in the job requirement. • Check the required rating based on its specification in accordance with standard.	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • Group discussion • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	4 hours
	3.2 Install wiring devices	• Read and familiarize: o Setting of lay-out and dimension of electrical drawing or wiring diagram. o Materials specification as per job requirements. o Proper installation of wiring devices. o Good housekeeping. • Apply methods and techniques in installation of various type of wiring devices • Practice proper handling of materials, tools and equipment • Perform the installation economically.	• Lecture • Demonstration • Modular (self-paced) • Dualized-training • Group discussion • PowerPoint/Video presentation	• Written test or examination • Direct observation and questioning • Demonstration (able to impart knowledge and skills) • Project method • Practical Lab/ Exercises	16 hours

Unit of Competency	Learning Outcomes	Learning Activities	Methodologies	Assessment Methods	Nominal Duration

	3.3 Install lighting fixtures/switches	• Read and familiarize:
		  ○ Guidelines Governing Occupational Safety and Health in the Construction Industry.
		  ○ Types and usage of different lighting fixtures/switches
		• Perform procedures for installation of lighting fixture/switches
		• Perform selection of lighting fixtures/ switches as per job requirements
		• Practice good housekeeping
		• Interpret plans and details
		• Practice proper handling of materials, tools and equipment
		• Apply methods and techniques in various types of lighting fixtures/ switches
		• Check and conform the installation based on job requirement
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
			• PowerPoint/Video presentation
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
				• Project method
				• Practical Lab/ Exercises
					16 hours

	3.4 Notify completion of work	• Describe Processes, Operations, Systems
		  ○ Maintenance of tools
		  ○ Storage of tools
		• Check and conform the installation based on job requirement
		• Practice good housekeeping
		• Perform commissioning activities
			• Lecture
			• Demonstration
			• Modular (self-paced)
			• Dualized-training
			• Group discussion
				• Written test or examination
				• Direct observation and questioning
				• Demonstration (able to impart knowledge and skills)
				• Practical Lab/ Exercises
					4 hours