

**Kurigram Polytechnic Institute, Kurigram**

Semester Plan

Course Name &amp; Code : Electrical Engineering Drawing (66733)

Technology : Electrical

Semester : 3<sup>rd</sup>

Teacher's Name : Shakila Aktar

Serial	No of week	No. of class	General Objectives	Specific Objectives	Remarks
1.	1.	1	<b>1 Construct first and third angle orthographic views.</b>	1.1 Understand orthographic projection in first and third angle. 1.2 Choose minimum required number of views and complete orthographic Drawing Of an object.. 1.3 Draw three views of an object having hidden features. 1.4 Identify and draw the missing view and missing line in a drawing of a engineering object.	
2.	2.	1	<b>2 Draw Isometric Drawing.</b>	2.1 Understand and draw the isometric drawing. 2.2 Draw an isometric circle. 2.3 Draw oblique views from orthographic views or actual object using isometric scale. 2.4 Put dimensions on isometric drawing.	
3.	3.	1.		Class Test & Quiz Test	
4.	4.	1	<b>3 Draw Oblique drawing.</b>	3.1 Understand and draw the oblique drawing. 3.2 Draw an oblique circle. 3.3 Draw oblique views from orthographic views or actual object. 3.4 Put dimensions on oblique drawing.	
5.	5.	1.	<b>4 Prepare the drawing conventions of thread fastening devices.</b>	4.1 Draw the threads showing terminologies. 4.2 Draw different types of screw thread profile with correct proportions. 4.3 Draw the square/hexagonal headed bolt and nut with proper proportions showing 4.4 conventional and simplified thread form.	
		1.	<b>5 Prepare the drawings of riveted and welded components.</b>	5.1 Draw the riveted and welded components using conventions and symbols. 5.2 Draw a complete set of riveted joint and welded joint.	
6.	6.	1	<b>6 Develop the drawing of an electrical distribution line structure.</b>	6.1 Draw the elevation, plan and section of a tubular steel pole used in LT distribution line. 6.2 Draw the elevation, plan and section of a concrete pole (RCC/PCC) of the following cross sections. • Circular • I-shaped • Rectangular 6.3 Draw the elevation plan and section of a wooden pole used in rural electrification .	
7.	7.	1.		Class Test & Quiz Test	
8.	8..		<b>8 Develop the drawing of insulators used in transmission and distribution line.</b>	8.1 Draw the elevation, plan and section of a standard suspension type insulator. 8.2 Draw the elevation, plan and section of a 11 KV pin type insulator. 8.3 Draw the elevation plan and section of a shackle insulator used in LT distribution line.	

9.	9.	1.	<b>9 Develop the plan of a pole mounted sub-station.</b>	9.1 Draw the plan of a H-type pole structure. 9.2 Draw a transformer on the middle limb of the structure. 9.3 Sketch the dropout fuses on the top of the transformer. 9.4 Show the gang operated (GO) switch. 9.5 Show the incoming and outgoing lines.	
		2.	<b>10 Develop the drawing of a LT distribution line (11KV/0.4KV)</b>	10.1 Draw the layout plan of a LT distribution line. 10.2 Draw the section of a pole showing the conductors. 10.3 Identify the line, neutral, earth and street lighting conductors.	
10.	10.	1. 2.	<b>11 Construct an electrical layout diagram and circuit diagram of a residential building.</b>	11.1 Draw a layout diagram of a small residential building. 11.2 Show the electrical fittings and fixtures on the layout plan. 11.3 Show the switch boards, distribution boards, energy meter and protective devices in the section plan. 11.4 Sketch the section of the distribution board. 11.5 Sketch the section of a switch board.	
11.	11.	1.		Class Test & Quize Test	
13.	13.	1 2	<b>12. Set up the drawing environment and drawing aids.</b>	12.1 Start an ECAD Package and identify the different areas of ECAD screen. 12.2 Identify the menu bar, toolbar, drawing area and special windows for circuit simulation and testing purpose. 12.3 Familiarize with tools, toolkits and buttons (such as arrow, wire, text, delete etc) 12.4 Familiarize with workspace, conventions, preferences, shortcuts and hotkeys. 12.5 Place components such as resistors, transistors, power supply etc. 12.6 Save the drawing environment. 12.7 Exit from the ECAD package.	
		1. 2.	<b>13. Draw and edit schematic Circuits.</b>	13.1 Place devices (such as resistors, transistors, IC, power supply, grounds etc) in the workspace. 13.2 Reposition devices. 13.3 Edit devices with values and parameters. 13.4 Delete devices (if necessary). 13.5 Wire devices together.	
14	14	1	<b>14. Analyze a schematic Circuit.</b>	14.1 Familiarize device meters, value sliders, goal seeker and circuit analyzer. 14.2 Add device meter to circuit diagram and set device meter values. 14.3 View Circuit voltage and current or digital logic level. 14.4 Change a device value and quickly analyze the circuit. 14.5 Perform DC and AC analysis of the circuit using circuit analyzer/oscilloscope. 14.6 Generate and print a frequency response graph. 14.7 Perform Digital analysis of a digital circuit. 14.8 Generate logic level graphs by using digital clock and oscilloscope.	
15	15	1		Review practical	
16	16	1		Review all practical	