GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN- 2025/26 (SUMMER)

Discipline :	Semester: 6th Sem	Name of the Teaching Faculty :LAXMIDHAR SAHU
Subject : EI&E	No. of Days / per week class allotted : 05	Semester From date : 22.12.2025 To Date : 18.04.2026

MONTH	Week	Day	Unit	Topics
DECEMBER	4TH		UNIT-1	**INDIAN ELECTRICITY RULES**
		1st		Definitions, Ampere, Apparatus, Accessible, Bare, cable, circuit, circuit breaker, conductor voltage (low, medium, high, EH)
		2nd		Definitions, live, dead, cut-out, conduit, system, danger, Installation, earthing system, span, volt, switch gear, etc
		3rd		General safety precautions, rule 29, 30, 31, 32, 33, 34, 35, 36, 40, 41, 43, 44, 45, 46.
		4th		**X- MAS**
		5th		General conditions relating to supply and use of energy : rule 47, 48, 49, 50, 51, 54, 55, 56, 57, 58, 59
	5TH	1st		General conditions relating to supply and use of energy : rule 60, 61, 62, 63, 64, 65, 66, 67, 68, 70
		2nd		OH lines : Rule 74, 75, 76, 77, 78, 79
		3rd		OH lines : Rule , 80, 86, 87, 88, 89, 90, 91
JANUARY	1st		UNIT-2	**ELECTRICAL INSTALLATIONS**
		1st		Electrical installations, domestics, industrial, Wiring System, Internal distribution of Electrical Energy.
		2nd		Methods of wiring, systems of wiring, wire and cable, conductor materials used in cables, insulating materials mechanical protection.
	2ND	1st		Types of cables used in internal wiring, multi-stranded cables, voltage grinding of cables, general specifications of cables.
		2nd		Main switch and distribution boards, conduits, conduit accessories and fittings, lighting accessories and fittings
		3rd		Fuses, important definitions, determination of size of fuse – wire, fuse units.
		4th		Earthing conductor, earthing, IS specifications regarding earthing of electrical installations, points to be earthed.
		5th		Determination of size of earth wire and earth plate for domestic and industrial installations. Material required for GI pipe earthing.
	3rd	1st		Aspects of good lighting services. Types of lighting schemes,
		2nd		Design of lighting schemes, factory lighting
		3rd		**MAKAR SANKRANTI**
		4th		Public lighting installations, street lighting, general rules for wiring
		5th		Determination of number of points (light, fan, socket, outlets), determination of total load, determination of Number of subcircuits.
	4TH	1st		Question Discussion
		2nd		Tutorial
		3rd		Tutorial
				INTERNAL WIRING
		4th		Type of internal wiring, cleat wiring, CTS wiring, their advantage and disadvantages
		5th		**NETAJI SUBHAS CHANDRA BOSE JAYANTI**
	5TH	1st		**REPUBLIC DAY**
		2nd		Wooden casing capping, Metal sheathed wiring, their advantage and disadvantages
		3rd		Conduit wiring, their advantage and disadvantages, comparison and applications.
		4th		Prepare one estimate of materials required for CTS wiring for small domestic installation of one room and one verandah within 25 m2 with given light, fan & plug points.
		5th		
FEBRUARY	1st	1st	UNIT-3	**FIRST MONTHLY TEST**
		2nd		**FIRST MONTHLY TEST**
		3rd		Prepare one estimate of materials required for conduit wiring for small domestic installation of one room and one verandha within 25 m2 with given light, fan & plug points.
		4th		
		5th		Prepare one estimate of materials required for concealed wiring for domestic installation of two rooms and one latrine, bath, kitchen & verandah within 80m2 with given light, fan & plug points.
	2ND	1st		
		2nd		Prepare one estimate of materials required for erection of conduct wiring to a small workshop installation about 30m2 and load within 10 KW.
		3rd		
		4th		Question Discussion
		5th		Tutorial
	3rd		UNIT-4	**OVER HEAD INSTALLATION**
		1st		Main components of overhead lines, line supports, factors Governing Height of pole
		2nd		Conductor materials, determination of size of conductor for overhead transmission line, cross arms
		3rd		Pole brackets and clamps, guys and stays,conductors configurations,spacing and clearances,span lengths
		4th		Overhead line insulators, types of insulators
		5th		**FIRST INTERNAL ASSESSMENT**
	4TH	1st		Lighting arresters, danger plates, anti-climbing devices,
		2nd		Bird guards, beads of jumpers, jumpers, tee-offs, guarding of overhead lines
		3rd		Prepare an estimate of materials required for LT distribution line within load of 100 KW maximum and standard spans involving calculation of the size of conductor (from conductor chart), current carrying capacity and voltage regulation consideration using ACSR.
		4th		
		5th		
	1st	1st		Question Discussion
		2nd		**DOLO PURNIMA**
		3rd		**HOLI**

MARCH	1st	4th		Tutorial
			UNIT-5	**OVER HEAD SERVICE LINES**
		5th		Components of service lines, service line (cables and conductors), bearer wire, lacing rod.
	2ND	1st		Ariel fuse, service support, energy box and meters etc.
		2nd		Prepare and estimate for providing single phase supply of load of 5 KW (light, fan, socket) to a single stored residential building.
		3rd		
		4th		Prepare and estimate for providing single phase supply load of 3KW to each floor of a double stored building having separate energy meter
		5th		
	3rd	1st		Prepare one estimate of materials required for service connection to a factory building with load within 15 KW using insulated wire.
		2nd		
		3rd		Question Discussion
		4th		Tutorial
			UNIT-6	**ESTIMATING FOR DISTRIBUTION SUBSTATIONS**
		5th		Types of different distribution transformers
	4TH	1st		Prepare one materials estimate for following types of transformer substations Pole mounted substation
		2nd		
		3rd		**SECOND INTERNAL ASSESSMENT**
		4th		**SECOND INTERNAL ASSESSMENT**
		5th		**SREE RAMA NABAMI**
	5TH	1st		Question Discussion
		2nd		Tutorial
APRIL	1st	1st		**UTKAL DIVAS**
		2nd		**Semester Question Discussion**
		3rd		**GOOD FRIDAY**
	2ND	1st		Prepare one materials estimate for following types of transformer substations Plinth Mounted substation
		2nd		
		3rd		
		4th		Question Discussion
		5th		Tutorial
	3rd	1st		**SECOND MONTHLY TEST**
		2nd		**MAHABISUBA SANKRANTI**
		3rd		**SECOND MONTHLY TEST**
		4th		**Semester Question Discussion**
		5th		**Semester Question Discussion**