	GOVERNMENT POLYTECHNIC, PURI	
	DEPARTMENT OF ELECTRICAL ENGINEERING	
Discipline: **ELECTRICAL ENGG**	Semester:4TH	Name of the Teaching Faculty: **MR JASOBANTA BARIK, PTGF IN ELECTRICAL ENGG. & MR NILAKANTA NAIK, LECTURER IN ELECTRICAL ENGG.**
Subject: **ENGINEERING DRAWING**	No. of days/per week class allotted: **06**	Semester From date: 10. 02 .2022 To Date: 01. 07 .2022 No. of weeks:15
PRE- REQUISITE	Basic knowledge of Engineering Drawing. Basic knowledge about about different types of starter(both AC and DC). Basic knowledge about DC machines windings(Lap and Wave). Basic kowledge about single line diagram,distribution system ,layout diagram of building and AUTOCAD software.	
COURSE OUTCOMES	**CO1.** Learn the meanings of various electrical symbols used in industry. **CO2**. Draw wiring circuit diagram and control circuit for different AC & DC motor starters. **CO3.** Draw D.C & A.C machine windings &Line supports as per B.I.S specs. **CO4.** Draw single line diagram of substation and develop practical understanding of D.C/A.C machines. **CO5.** Design electrical layout of electric installation through C.A.D software.	

Week	Class Day	Theory / Practical Topics	DELIVERY METHOD
1st	1st	1.1 3 point D. C. motor starter. 1.2 4 point D.C. motor starter.	whiteboard
	2nd	1.1 3 point D. C. motor starter. 1.2 4 point D.C. motor starter.	whiteboard
2nd	1st	1.3 DOL starter 1.4 Star delta starter.	whiteboard
	2nd	1.3 DOL starter 1.4 Star delta starter.	whiteboard
3rd	1st	1.5 Auto Transformer Starter. 1.6 Rotor resistance starter.	whiteboard
	2nd	1.5 Auto Transformer Starter. 1.6 Rotor resistance starter.	whiteboard
4th	1st	2.1. Pole with pole shoes. 2.2. Commutator	whiteboard
	2nd	2.1. Pole with pole shoes. 2.2. Commutator	whiteboard
5th	1st	2.3. Armature 2.4. DC. armature winding (a) Simple lap winding	whiteboard
	2nd	2.3. Armature 2.4. DC. armature winding (a) Simple lap winding	whiteboard
6th	1st	(b) Simple wave winding.	whiteboard
	2nd	(b) Simple wave winding.	whiteboard
7th	1st	3.1 Stepped core type.	whiteboard
	2nd	3.1 Stepped core type.	whiteboard
8th	1st	3.2 Plane shell type.	whiteboard
	2nd	3.2 Plane shell type.	whiteboard
9th	1st	5.1 Earthing installation.	whiteboard
	2nd	5.1 Earthing installation.	whiteboard

10th	1st	5.2 Double pole structure for LT distribution lines	whiteboard
	2nd	5.2 Double pole structure for LT distribution lines	whiteboard
11th	1st	5.2 Double pole structure for HT distribution lines	whiteboard
	2nd	5.2 Double pole structure for HT distribution lines	whiteboard
12th	1st	6.1 Single line diagram of 33/11kV distribution substation.	whiteboard
	2nd	6.1 Single line diagram of 33/11kV distribution substation.	whiteboard
13th	1st	6.2 Single line diagram of a 11/0.4 kV distribution substation.	whiteboard
	2nd	6.2 Single line diagram of a 11/0.4 kV distribution substation.	whiteboard
14th	1st	8.1 Draw Electrical symbols (take Print out) 8.2 Draw D.C. m/c parts (take print out)	whiteboard
	2nd	8.1 Draw Electrical symbols (take Print out) 8.2 Draw D.C. m/c parts (take print out)	whiteboard
15th	1st	8.3 Draw A. C. m/c parts (take print out) 8.4 Draw electrical layout of diagram of Electrical Installation of a building.	whiteboard
	2nd	8.3 Draw A. C. m/c parts (take print out) 8.4 Draw electrical layout of diagram of Electrical Installation of a building.	whiteboard

10/03/22
Sign. of Faculty concerned

17/5/22
Principal
GP Puri

17/5/22
Sign. of HOD i/c