

# *Ramgarhia Polytechnic College, Phagwara*



## *Electrical Engineering Department*

Head of Department:	S. Jasvir Singh
Name of the Faculty:	S. Jasvir Singh Er.Sandeep Singh
Discipline:	Electrical Engineering Department
Semester:	5 <sup>th</sup>
Subject:	Minor Project
Lesson Plan Duration:	16 Weeks








### **RATIONALE**

Minor project work aims at exposing the students to industrial/field practices so as to have an appreciation of size, scale and type of operations; and work culture in the industries.

### **Learning Outcomes**

After undergoing this course, the students will be able to:

- CO1. Apply concepts, principles and practices taught in the classroom in solving field/industrial problems.

PO ⇒	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO ⇩							
CO1							

## Syllabus

Units	Details
1.	Various types of cables available in the market, their current rating/specifications, different makes/manufacturing companies (minimum three), comparison of cost between different makes.
2.	Various types of domestic/wiring components such as switches, sockets, holders etc., their specifications, different makes or manufacturing companies (minimum three), comparison of cost between different makes.
3.	Various types of protective devices used in domestic and industrial wiring such as MCBs, ELCB/RCCB, fuses etc. their specifications, make (minimum three), and comparison of cost between different makes.
4.	Various types of electric lamps (lumeneries) available in the market, their specifications, different makes or manufacturing companies (minimum three), comparison of cost between different makes.
5.	Various types of Electrical Appliances (domestic and commercial) available in the market, their specifications, different makes or manufacturing companies (minimum three), comparison of cost between different makes. (compare any one type)
6.	Survey and study of house wiring accessories, manufacturers, rates, specifications, their literature collection for their design
7.	Study of LT/HT components, detailed specifications from catalogues of manufacturers, drawings, rates, availability in local market

### Reference Books:

1. Modern Electric Traction by H Partap, Dhanpat Rai & Sons, Delhi
2. Utilization of Electrical Energy by Sahdev, Uneek Publication, Jalandhar

### Delivery/Instructional Methodologies

Sr.No.	Description
1.	Chalk and Talk
2.	PowerPoint Presentation

### Assessment Methodologies

Sr. No.	Description	Type
1.	Student Assignment	Direct
2.	Student Feedback	Direct

### Gaps in the syllabus - to meet industry/profession requirements

S.NO.	DESCRIPTION	PROPOSED ACTIONS	PO MAPPING
1	N/A	N/A	N/A

### Topics beyond syllabus/advanced topics

Units	Details	Hours
N/A	N/A	N/A

### Web Source References

Sr. No.	URL
1.	<a href="https://nptel.ac.in/">https://nptel.ac.in/</a>

## Lesson Plan

Week	Theory		Practical	
	Lecture Day		Practical Day	
1 <sup>st</sup>			1 <sup>st</sup>	Introduction
			2 <sup>nd</sup>	
			3 <sup>rd</sup>	
			4 <sup>th</sup>	
			5 <sup>th</sup>	
			6 <sup>th</sup>	
2 <sup>nd</sup>			7 <sup>th</sup>	Grouping
			8 <sup>th</sup>	
			9 <sup>th</sup>	
			10 <sup>th</sup>	
			11 <sup>th</sup>	
			12 <sup>th</sup>	
3 <sup>rd</sup>			13 <sup>th</sup>	Selection of project
			14 <sup>th</sup>	
			15 <sup>th</sup>	
			16 <sup>th</sup>	
			17 <sup>th</sup>	
			18 <sup>th</sup>	
4 <sup>th</sup>			19 <sup>th</sup>	Market survey -I
			20 <sup>th</sup>	
			21 <sup>st</sup>	
			22 <sup>nd</sup>	
			23 <sup>rd</sup>	
			24 <sup>th</sup>	
5 <sup>th</sup>			25 <sup>th</sup>	Market survey -II
			26 <sup>th</sup>	
			27 <sup>th</sup>	
			28 <sup>th</sup>	
			29 <sup>th</sup>	
			30 <sup>th</sup>	
		31 <sup>st</sup>	Market survey -III	
		32 <sup>nd</sup>		
		33 <sup>rd</sup>		

6 <sup>th</sup>			34 <sup>th</sup>	
			35 <sup>th</sup>	
			36 <sup>th</sup>	
7 <sup>th</sup>			37 <sup>th</sup>	Market survey -IV
			38 <sup>th</sup>	
			39 <sup>th</sup>	
			40 <sup>th</sup>	
			41 <sup>st</sup>	
			42 <sup>nd</sup>	
8 <sup>th</sup>			43 <sup>rd</sup>	Market survey -V
			44 <sup>th</sup>	
			45 <sup>th</sup>	
			46 <sup>th</sup>	
			47 <sup>th</sup>	
			48 <sup>th</sup>	
9 <sup>th</sup>			49 <sup>th</sup>	Market survey -VI
			50 <sup>th</sup>	
			51 <sup>st</sup>	
			52 <sup>nd</sup>	
			53 <sup>rd</sup>	
			54 <sup>th</sup>	
10 <sup>th</sup>			55 <sup>th</sup>	Market survey -VII
			56 <sup>th</sup>	
			57 <sup>th</sup>	
			58 <sup>th</sup>	
			59 <sup>th</sup>	
			60 <sup>th</sup>	
11 <sup>th</sup>			61 <sup>st</sup>	Market survey -VIII
			62 <sup>nd</sup>	
			63 <sup>rd</sup>	
			64 <sup>th</sup>	
			65 <sup>th</sup>	
			66 <sup>th</sup>	
			67 <sup>th</sup>	

12 <sup>th</sup>			68 <sup>th</sup>	Discussion on Market survey –I & Market survey -II
			69 <sup>th</sup>	
			70 <sup>th</sup>	
			71 <sup>st</sup>	
			72 <sup>nd</sup>	
13 <sup>th</sup>			73 <sup>rd</sup>	Discussion on Market survey –III & Market survey –IV
			74 <sup>th</sup>	
			75 <sup>th</sup>	
			76 <sup>th</sup>	
			77 <sup>th</sup>	
			78 <sup>th</sup>	
14 <sup>th</sup>			79 <sup>th</sup>	Discussion on Market survey –V & Market survey -VI
			80 <sup>th</sup>	
			81 <sup>st</sup>	
			82 <sup>nd</sup>	
			83 <sup>rd</sup>	
			84 <sup>th</sup>	
15 <sup>th</sup>			85 <sup>th</sup>	Discussion on Market survey –VII & Market survey -VIII
			86 <sup>th</sup>	
			87 <sup>th</sup>	
			88 <sup>th</sup>	
			89 <sup>th</sup>	
			90 <sup>th</sup>	
16 <sup>th</sup>			91 <sup>st</sup>	Submission of Report
			92 <sup>nd</sup>	
			93 <sup>rd</sup>	
			94 <sup>th</sup>	
			95 <sup>th</sup>	
			96 <sup>th</sup>	

**NBA has defined the following seven POs for an Engineering diploma graduate:**

- i) **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- ii) **Problem analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
- iii) **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
- iv) **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
- v) **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.
- vi) **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
- vii) **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

### **Program Specific Outcomes (PSOs)**

PSOs are a statement that describes what students are expected to know and be able to do in a specialized area of discipline upon graduation from a program. Program may specify 2-4 program specific outcomes, if required.

These are the statements, which are specific to the particular 11 program. They are beyond POs. Program Curriculum and other activities during the program must help in the achievement of PSOs along with POs.