

*Workshop Report on*  
**Electrical Design, Estimation and Costing of Wiring System at  
DADSCOE**

*Submitted by*



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*Submitted to*

Dinkarrao K. Shinde Smarak Trusts

**DR.A. D. SHINDE COLLEGE OF ENGINEERING.**  
Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502  
**Academic Year 2023-24**  
**Department of Electrical Engineering**



	<p style="text-align: center;">Dinkarrao K. ShindeSmarak Trusts</p> <p style="text-align: center;"><b>DR.A. D. SHINDE COLLEGE OF ENGINEERING.</b>          Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502  <b>Department of Electrical Engineering</b>  <b>Academic Year 2023-24</b></p>	
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## Workshop Report

**Name of the Workshop:** Electrical Design, Estimation and Costing of Wiring System

**Date:** 24/6/2024 to 29/06/2024

**Inauguration Time:** 24/6/2024 at 10.30 AM

**Venue:** Seminar hall DADSCOE

**Name of the resource person:** Dr. Vireshkumar

## **Acknowledgement**

I express my sincere gratitude to **Prof. A. M. Deasi**, Head of the Department, Electrical Engineering, **Prof. Kishor Joshi** Vice-Principal and **DR. D. V. Ghewade**, Principal, Dr. A. D. Shinde College of Engineering, Bhadgaon for providing me an opportunity and infrastructure to undertake this workshop programme in the Electrical Engineering Department.

I would like to extend my sincere thanks to all the Students of Electrical Engineering and Electronics and Computer Science Engineering, DADSCOE, Bhadgaon for their participating during the workshop programme.

I would also like to extend my sincere thanks to all the faculty and non-teaching staff of Electrical Engineering, DADSCOE, Bhadgaon continuous support and encouragement.

**Dr. VireshkumarMathad**

# **INTRODUCTION**

## **1.1 Organization Description.**

Dr A D Shinde College of Engineering is established in 2014 under the umbrella of Dinkarrao K. Shinde Smarak Trust. The main motto behind establishment of Dr. A. D. Shinde College of Engineering is to help rural area students to gain technical knowledge with minimum fees. Adv. Shriatrao D. Shinde, Ex. MLA set upped the bench mark for rural students for gaining technical education on the name of his brother Late. Dr. A.D. Shinde and we are happy to inform institute is running with emerging technical departments which will give good opportunities for students and satisfy parents after their children's education. Institute is Approved by AICTE, New Delhi, DTE, Mumbai and affiliated to Shivaji University, Kolhapur and Recently Accredited by NAAC "B+" Grade for the period of five years and ISO 9001:2015 Accredited.

### **Vision of the Institute**

To provide best quality education in the field of Engineering and Technology to the aspirants and serve the nation through developments of scientific, creative, trustworthy human asset.

### **Mission of the Institute**

- M1: To meet engineering manpower needs for social, techno-economical development of region and nation
- M2: To contribute to knowledge through research and development.
- M3: To imbibe habits of creativity and innovation to generate IPRS.
- M4: To inculcate noble values of ethics, morality, integrity, and humanity.
- M5: To get global accreditation for all courses

### **Vision of the Department**

To provide best education in Electrical Engineering and technology to the aspirants and serve the nation through development of innovative human asset.

### **Mission of the Department**

- M1: to make the department of Electrical Engineering a preferable destination for admissions.
- M2: to provide quality Technical Education using modern tools in the field of Electrical

Engineering.

M3: to create competent and skilled Electrical Engineers who are able to handle Electric and Allied system.

M4: to make the department of Electrical Engineering learning and agile center to nurture the spirit of innovation, creativity and entrepreneurship among the students and the faculty members.

## **1.2 Estimating:**

Estimating is an art of assessment of quantities of different items and cost thereof to plan the amount required for executing a work before actually carrying out the work.

The estimate is prepared to help in taking a right and definite decision while entering into a contract with any firm but does not in itself set up tender or contract. The functions of an estimator are so interconnected in various parts of estimating programme that it is difficult to outline them. In general, however, this can be listed under four headings:

1. Estimation of quantities of the material required and the cost involved.
2. Analysis of costs.
3. Maintaining proper records.
4. Providing selling aids.

## **1.3 Purpose of estimating and costing:**

As per good management practices we must know the material required (with complete specifications and quantity of each item) and the cost to be incurred thereon before taking up any new program in hand. For this, it becomes necessary to prepare a complete project for the given program in hand. For this, it becomes necessary to prepare a complete project for the given program as it will act as a guide in the successful implementation of the program. The project report includes complete details of the work to be carried out such as detailed drawings of the work, complete details of the required materials with costing and the sequence of operations to be performed.

Estimating is also essential as it provides us an accurate assessment of the amount of money required, availability of material etc. In case any program is taken in hand and started without preparing project report and without estimating and costing, it will be difficult, rather impossible, to complete the work uninterruptedly because shortage of money and/or non-availability of materials may cause blockade at any stage.

The following facts (data) related to the estimate should be known to an estimator, while he prepares an estimate for internal wiring:

1. Complete specifications, giving the general scheme of the installation, type of wiring to be adopted and type and quality of materials to be used in it.
2. Complete schedule of the points to be wired for with their switches and fittings or alternatively details of whatever else relating to the estimate.
3. Plans and section marked with details, at least with the positions of main switchgear and distribution boards.
4. Other information about other factors affecting the costing of an estimate such as state and construction of the building, the distance of the job from the main office, time available to complete the job, (whether it is to be finished in very short time requiring overtime or normal time or it is to be spread over a long period, whether it requires special supervision or special tools, type of workmen available and the conditions and weather in which job is to be carried out.)

Before accepting or offering tender or to decide the terms of contracts, it is necessary that estimate must be prepared reaching to an approximate cost of the job. Every organization, even medium sized one, have separate department of estimating. The person preparing the estimate is known as an *estimator*.

Bearing in mind that tenders and firm contracts are based upon the estimates i.e. the work of the estimator, to achieve work orders and to avoid losses it is necessary that estimate should be prepared as accurate as possible. If guess work is made to work out the cost of the job, then, there is a possibility either of quoting too high prices resulting in no order or of quoting too low prices resulting in heavy losses instead of profit.

The estimator should have knowledge far reaching and his statements must be based on reliable evidences if he wants to do justice to his task.

The estimator must build himself a library containing catalogues and price lists of all the products of his own organization and of those items or goods, which are likely to be

associated with his work. He should pay continual attention to keep prices and other related information up-to-date.

Besides this, he must understand production cost including labour and material of his own organization products as well as the discounts permissible on outside purchases in order to work out profit.

There is only one sure logical method of estimating for electrical works and that is to ascertain the quantities involved accurately, price them at net cost, provide overhead charges in order to arrive at a total cost representing the true dividing line between a certain loss and possible profit.

#### **1.4 Introduction to Electrical Installation Estimating & Costing of the Resident.**

House/Resident electrical wiring is a process of connecting different accessories for the distribution of electrical energy from the supplier to various appliances and equipment at home like Television, Lamps, Air conditioners, etc.

Estimating is an art of assessment of quantities of different items and cost thereof to plan the amount required for executing a work before actually carrying out the work. In general, however, functions of an estimator can be listed under four headings :

1. Estimation of quantities of the material required and the cost involved.
2. Analysis of cost.
3. Maintaining proper records.
4. Providing selling aids.

Purpose of Estimating and Costing.

1. Estimates provide an rough idea of the cost of the job and therefore its feasibility can be calculated, i.e. whether or not the project would be included in the funds available.
2. Estimate gives an idea of the time needed to complete the work.
3. Estimates are required to invite tenders and quotations and to arrange the contracts.
4. Estimates are also required to control expenditure during the execution of the work.
5. Estimates decide whether or not proposed plan matches the funds available.

The following facts ( data ) related to the estimate should be known to an estimator, while he prepares an estimate for internal wiring :

1. Complete specifications, giving the general scheme of the installation, type of wiring to be adopted and type and quality of materials to be used in it.

2. Complete schedule of the points to be wired for with their switches and fitting or alternatively details of whatever else relating to the estimate.
3. Plans and sections marked with details, at least with the positions of main switchgear and distribution boards.
4. Other information about other factors affecting the cost of an estimate such as state and construction of the building, the distance of the job from the main office, time available to complete the job.

## **1.5 Objectives:**

1. To satisfy the user's needs and requirements, while coordinating the various components, such as lighting, heating, and other systems, always complying with protection and safety standards.
2. A good electrical wiring system doesn't only need to fulfill the purpose for which it was installed, but must feature a very high level of safety, quality, and flexibility, that will allow an easy maintenance in time, while guaranteeing a continuous and reliable power supply.
3. Reliability of a well-functioning electrical wiring system.



## Inauguration function:



## Practical Working Images



**Before Image**



**After Image**

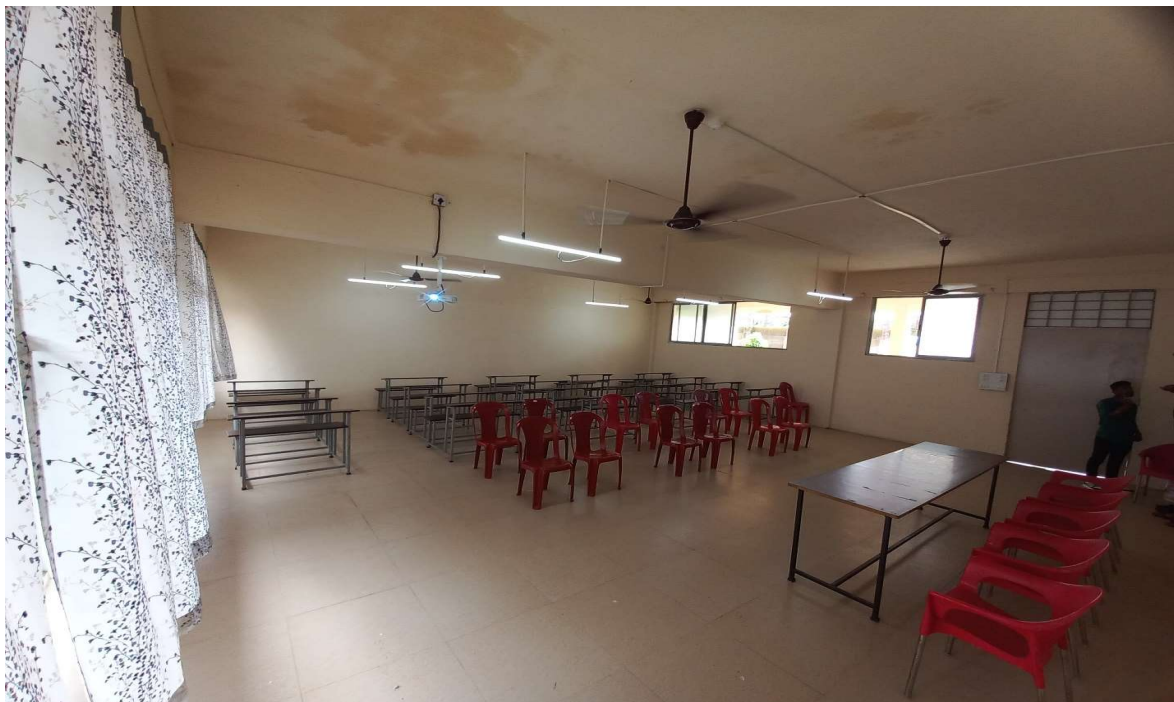




**Before Image**



**After Image**











































































































## Inauguration function of Workshop





**Workshop on**  
**“Electrical Design, Estimation and Costing of Wiring System at DADSCOE” from**  
**24/06/2024 to 29/06/2024**

**Students Attendee**

		Dinkarrao K. Shinde Smarak Trusts						
DR. A. D. SHINDE COLLEGE OF ENGINEERING.		Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502						
Department of Electrical Engineering		Academic Year 20223-24						
S. No.	Name of the student	PRN	Signature of the student					
			24/6/24	25/6/24	26/6/24	27/6/24	28/6/24	29/6/24
1	Khairmode Ravikiran R(ECS)	2023077374						
2	Pradiwal Chourake (ECS)	2023078559						
3	Rohit Kamble (EE)	2022085721						
4	Dnyaneshwari Patil (ECS)	2023078355						
5	Godase karuna Tukaram	2023078940						
6	Shivanand M. Mujgonda(ECS)	2023077992						
7	Kishi M. Tangadi (EE)	2023076282						
8	shravan S. Patil (EE)	2022078860						
9	Aniket R Ayare (EE)	2022078626						
10	Hritik R. Jadhav	2022078738						
11	Dang Vinay V.	2022078767						
12	Vinay Anil Karkaware	2023078855						
13	Tejaswini T. Patil (ECS)	2023077961						
14	Samudhi S. Ingawale (ECS)	2023077989						
15	Manali P. Mohare ECS	2023077962						
16	Aftab. M. Mulla (ECS)	2023077990						
17	Rutuja C. Padekar (ECS)	2023083468						
18								

**Sample Certificate**



Dinkarrao K Shinde Smarak Trust, Gadhinglaj

**Dr. A. D SHINDE COLLEGE OF ENGINEERING**

A/p:Bhadgaon, Tal: Gadhinglaj, Dist:Kolhapur Maharashtra-416502

Accredited by NAAC B+



## CERTIFICATE

This is to Certify that

Mr./ Miss. Tejaswini T. Patil class TY

from Department of Electronics & Computer Engineering



has participated in Electrical Design, Estimation & Costing of Electrical Wiring System workshop

held on dated 24/06/2024 to 29/06/2024.

  
 Coordinator

  
 HOD

  
 PRINCIPAL

	<p style="text-align: center;">Dinkarrao K. ShindeSmarak Trusts</p> <p style="text-align: center;"><b>DR.A. D. SHINDE COLLEGE OF ENGINEERING.</b>  Bhadgaon, Gadhinglaj. Dist: Kolhapur Pin:416502  <b>Department of Electrical Engineering</b>  <b>Academic Year 2023-24</b></p>	
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### Workshop Account Details

S.No.	Money spent details	Amount spent	Reason
1	Electrical casing capping Materials, board cutting etc.	196	Wiring
2	Wire 1 Sq mm, flexible wire, screws	3576	Wiring
	Wiring materials	1744	Class room ambience
3	Boars, pipe,	515	Class room ambience
4	Curtains	2094	Class room ambience
	<b>GRAND TOTAL</b>	<b>8125/-</b>	

### Contributions

S.No.	Money spent details	Amount spent
1	ESA Association	40000
3	From College	4125
	<b>GRAND TOTAL</b>	<b>8125/-</b>



Dr. Vireshkumar mathad  
Coordinator



Dr. D. V. Ghewade  
Principal