 Republic of the Philippines

Laguna State Polytechnic University

Province of Laguna

**ELECTRICAL POWER TRANSMISSION AND**

**DISTRIBUTION SYSTEM DESIGN**

Submitted by:

**ARANILLO, CARLO P.**

BSEE-5A

Submitted to:

**CARLO P. ARANILLO, REE, RME, LPT, MPA**

Instructor

January 06, 2023

**LETTER OF TRANSMITTAL**

**CARLO P. ARANILLO, REE, RME, LPT, MPA**

Electrical Engineering Department

Laguna State Polytechnic University - Santa Cruz Campus

Brgy. Bubukal, Santa Cruz, Laguna

Dear Sir:

I, the undersigned, hereby respectfully submit this design entitled “ELECTRICAL POWER TRANSMISSION AND DISTRIBUTION SYSTEM DESIGN” as fulfillment of the requirement in EE 5214.

This design focused with much emphasis on power distribution principles. It also covers the computations for the sizes of wires, feeder characteristics and so on.

With all my prayers and determination, I earnestly hope that this project will merit your kindest approval.

Respectfully yours,

**Aranillo, Carlo P.**

**APPROVAL SHEET**

This design entitled “ELECTRICAL POWER TRANSMISSION AND DISTRIBUTION SYSTEM DESIGN” is prepared and submitted by:

**Aranillo, Carlo P.**

In partial fulfillment of the requirements in BSEE, has been examined, accepted, approved and recommended by the

**College of Engineering**

**Laguna State Polytechnic University-Santa Cruz Campus**

**CARLO P. ARANILLO, REE, RME, LPT, MPA**

**Program Head, Electrical Engineering Department**

**ACKNOWLEDGEMENT**

**DEDICATION**

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**INTRODUCTION**

The art of designing power distribution system cannot be acquired by reading books alone. It may be said at the outset that the purpose of this computation is to train students in electrical engineering the fundamental principles of power system analysis through application to concrete design.

In explaining the design procedures, an attempt has been made to build up a design in a logical manner from known fundamental principles. This is an admittedly different from the method followed by a practical designer who uses empirical formulas and short cuts, justifies only by experience and practical knowledge.

There is no doubt that the very simplest design problem result to confusion – a scenario where the instructor’s help is of great factor for the students to understand the problem behind. Some conflicts between theoretical and actual applications can only be answered by successfully surfing the depth of electrical designs different faces.

LOADINGS

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

CALCULATIONS

FORM 1

FORM 2-4

FORM 5-6

FORM 7

FAULT CALCULATION

SUBSTATION DESIGN

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ACTUAL REPRESENTATION OF DESIGN