

**INDUSTRIAL EDUCATION SERIES.
ELEMENTARY MAGNETISM AND
ELECTRICITY: PREPARED IN THE
EXTENSION DIVISION OF THE
UNIVERSITY OF WISCONSIN**

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CYRIL M. JANSKY

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**ELEMENTARY
MAGNETISM AND ELECTRICITY**

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Frontispiece.

Apparatus used by students when studying this text.

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**ELEMENTARY
MAGNETISM AND ELECTRICITY**

PREPARED IN THE
EXTENSION DIVISION OF
THE UNIVERSITY OF WISCONSIN

BY

CYRIL M. JANSKY, B. S., B. A.
ASSOCIATE PROFESSOR OF ELECTRICAL ENGINEERING
THE UNIVERSITY OF WISCONSIN

FIRST EDITION

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PREFACE

In the preparation of this text, the author has had in mind the needs of students who may have had some practical experience with electrical apparatus or machinery, but whose knowledge of the principles of its operation and of mathematics is limited. To make magnetic and electric principles real to such students, the subject is developed experimentally. The student is expected to perform simple experiments and thus to observe the actual phenomena. Then by questions and discussions he is aided in the interpretation of his observations, and the formulation of his conclusions into workable ideas.

In order that the subject may interest men in the electrical industries who are not technically trained, some practical applications of the fundamental magnetic and electric principles are illustrated and described. It is the writer's experience that such a presentation appeals strongly to the industrial worker who wishes to understand the *how* and *why* of things electrical.

The text is intended for individual or home study, although it may be used in class work when a supply of apparatus is available. This apparatus is inexpensive and most of it can be made by an ingenious student. It need not be exactly like that described in the text. The conversational style in which the work is written has been found very helpful in correspondence instruction as it seems to establish a personal relation between the student and instructor.

Although the text has been prepared for use in correspondence instruction, it is hoped that it may be of service to continuation schools, Y. M. C. A. schools, and plant schools that give a course of like nature.

The author is under obligation to Mr. G. G. Thompson, engineer of the Cutler Hammer Company, for reading the manuscript and for making many valuable suggestions, and to Mr. G. R. Wells for making the line drawings. The author also wishes to express his appreciation of the kindness of the various manufacturers of electrical apparatus and machinery who have furnished illustrative material.

C. M. J.

THE UNIVERSITY OF WISCONSIN,
MADISON, WISCONSIN,
January, 1914.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent data collection procedures and the use of advanced analytical techniques to derive meaningful insights from the data.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and processing, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that the data remains reliable and secure throughout its lifecycle.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of a data-driven approach in decision-making and the need for continuous monitoring and improvement of data management practices.