

DESIGN AND DEVELOPMENT OF LABORATORY SHEET
DISPENSER FOR DEPARTMENT OF INDUSTRIAL
ENGINEERING AND TECHNOLOGY

Design Project

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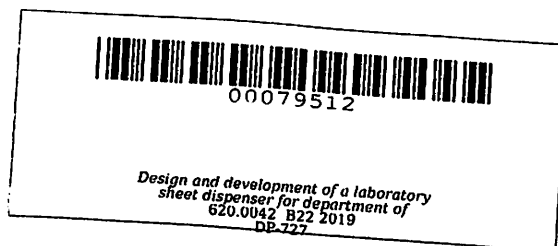
College of Engineering and Information Technology
CAVITE STATE UNIVERSITY
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**DESIGN AND DEVELOPMENT OF LABORATORY SHEET DISPENSER FOR
DEPARTMENT OF INDUSTRIAL ENGINEERING AND TECHNOLOGY**

**Undergraduate Design Project
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite**

**In partial fulfillment
of the requirements for the degree
Bachelor of Industrial Technology
major in Electronics Technology**



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ABSTRACT

BANTOLINO, JOHN RENZ D., MANUEL, JAYVEE G., TAMAGOS, SHEENARY C., and VEJERANO, EROS C. Design and Development of Laboratory Sheet Dispenser for Department of Industrial Engineering and Technology. Bachelor of Industrial Technology major in Electronics. Cavite State University, Indang, Cavite. December 2019. Adviser: Mr. Ronald E. Araño.

The study was conducted from June 2019 to November 2019 at Brgy. Kayquit III 232, Narra Street, Indang, Cavite to develop a laboratory sheet dispenser. Specifically, it aimed to 1. design a circuit of a vending machine for the laboratory sheet dispenser; 2. construct a circuit of vending machine for laboratory sheet dispenser; 3. test the workability, functionality, aesthetics, economy and safety of the proposed design project; and 4. evaluate the workability, functionality, aesthetics, economy and safety of the proposed design project.

Laboratory sheet dispenser is used in the Department of Industrial Engineering and Technology (DIET) for the students to purchase exact quantity of the laboratory sheets. It also eliminates downtime and manpower for the faculty to operate the said design project.

The project was covered with simple but effective way for faster transaction for the purchase laboratory sheet dispenser and to make it the payment secured and organized.

The researchers envision that the project can help the Electronic students to understand the basic function of each component in the project, especially the microcontroller Arduino Nano.

The overall development of this design project is successful. Through the participation of the DIET students and DIET faculty during the evaluation process, the combined computed mean based on the results of the evaluation garnered a 4.74 with a descriptive rating of outstanding. This result shows that the project is highly acceptable by the different evaluators.

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INTRODUCTION

Vending machines nowadays gave us an incomparable level of convenience. Instead of going to convenient stores, just as easy as playing with coins as a token for a game, and choose desired product, whether it's a snack or beverage, it is all over from the schools, airports, office buildings, shopping malls and to the sports stadiums, vending machines are just found about everywhere.

Vending machines usually work, when certain money (depending on the currency and denomination programmed is put in a coin slot. Then, it is now ready to select the desired item, maybe a button needs to be pushed, or a lever pulled, additionally, some vending machines can select the quantity desired. If there is enough money, the selected item will be dropped on a tray, where it can be taken out by the person making the purchase. Older vending machines were all mechanical; whether it is needed to be pulled by a lever, or twisting a knob, but most new ones is partly electronic. Many modern vending machines can accept debit or credit cards in addition to cash.