



اَوْنِيُوْرْسِيْتِي تِيكْنُوْلُوْجِي مَارَا  
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**CAWANGAN TERENGGANU**

**MEC 299**

**DESIGN AND FABRICATION OF ORANGE AND APPLE  
CUTTER MACHINE**

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## **ABSTRACT**

Increased rivalry and technological progress tend to replace existing items with new and advanced products. However, innovation is insufficient without ergonomic design, which provides individuals or workers with the comfort and safety they need to engage in their task. Cutting apples in large quantities is a time-consuming and tiresome operation. Furthermore, the traditional cutting procedure such as using a knife carries the risk of injuring workers by slicing off their fingers. As a result, there was a need to build a machine that could conduct activities like cutting in order to save time and work hours. This project focuses on the design and fabrication of orange and apple cutter by considering ergonomic principles. The orange and apple cutter are a tool to cut an apple into some portions.

## TABLE OF CONTENTS

<b>1.0</b>	<b>Introduction</b>	<b>7</b>
1.1	Background of Study	
1.2	Problem Statement	
1.3	Objective	
1.4	Scope of Work	
1.5	Expected Results	
<b>2.0</b>	<b>Literature Review</b>	<b>11</b>
2.1	Fruits Cutter	
2.2	Type of Fruits Cutter	
2.3	Material Used in Previous Product	
2.3.1	Stainless Steel	
2.3.2	Wood	
2.3.3	Plastic	
<b>3.0</b>	<b>Methodology</b>	<b>17</b>
3.1	Definition and Concepts of Mechanical Engineering Design	
3.1.1	The Design Process	
3.2	Flowchart	
3.3	Preliminary Result	
3.3.1	Problem Definition and Need Identification	
3.3.1.1	House of Quality	
3.3.1.2	Product Design Specification	
3.3.2	Concept Generation and Evaluation	
3.3.2.1	Concept Generation Method	
3.3.3	Morphological Table	
3.3.3.1	Concept 1 & 2	
3.3.3.2	Concept 3	

**3.3.3.3 Concept 4 & 5**

**3.3.4 Pugh's Chart**

**3.3.5 Concept Selection**

**3.4 Gantt Chart**

**5.0 References**

**33**

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 BACKGROUND OF STUDY**

There had been many innovations that have been produced in the process of cutting fruits, where there are various of designs produced in helping the problem faced when using traditional methods in the process of cutting fruits. Each design is designed to have its own shape and characteristics.

One of the studies that has been found through the internet is geared fruits cutter[1]. Even the size is about the same with this orange and apple cutter but the price is more expensive above this tool. The material chosen to make the cutter is also important to make the cutter affordable for most people. I also found a slider-crank mechanism involved in some other cutter [1]. It will make it easier to use but it will be more complicated to make the tool.

The principle of lever mechanism will be involved to make this cutter [2]. A handle is used to lift up the fruit holder then the fruit will be put in the middle between the fruit holder and the blade. Then the handle will be push down to drain the pressure from the handle to the fruit until the fruit are divided into some portions.

This tool can store in the corner of the kitchen as the tool are not so big. As the size of the tool are just to cut an average size of an orange and apple, so the tool can be easily store anywhere and it also can be brought anywhere if the owner wanted to travel somewhere. This tool is targeted to involve in the marketing for small fruit business owner and for household use.