

**UNIVERSITI TEKNOLOGI MARA**

**FABRICATION ON 3D PRINTING OF  
AUTOMOTIVE INTERIOR PARTS  
USING PLA & PETG AND STUDY  
THE FILAMENT PARAMETERS**

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## **ABSTRACT**

Nowadays, the process of creating a three-dimensional solid object from a digital file or 3D printing is widely recognized. PLA and PETG filaments are commonly used to build automotive parts. This project aims to fabricate automotive interior parts which are side wiper signal, brake pedals, and gear shifter, and study the PLA and PETG parameters. For the methods, Fused Deposition Modelling will be used for 3D printing models, while the experiment will employ a tensile machine and torsion machine. This will involve using Solidworks to design the model and conduct an experiment to study the filament parameters. It is also involved to print the 3d model using a 3D printing machine. The model is expected to be 3D printed and know the filaments yield strength, torsional strength, and ductility. This study will enhance the performance and material selection for the 3D printing of automotive parts.

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# TABLE OF CONTENTS

	<b>Page</b>
<b>CONFIRMATION BY SUPERVISOR</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xi</b>
<b>CHAPTER ONE : INTRODUCTION</b>	<b>1</b>
1.1 Background of Study	1
1.2 Problem Statement	3
1.3 Objectives	3
1.4 Scope of Work	4
1.5 Significance of Study	6
<b>CHAPTER TWO : LITERATURE REVIEW</b>	<b>7</b>
2.1 3D Printing Machine	7
2.2 Material	8
2.2.1 PLA filament	8
2.2.2 PETG filament	8
2.3 Tensile	9
2.4 Torsion test	10
<b>CHAPTER THREE : METHODOLOGY</b>	<b>12</b>
3.1 Introduction	12
3.2 Sketching	12
3.3 Printing Process	13
3.4 Flowchart	14

3.5	Gantt chart	15
<b>CHAPTER FOUR : RESULTS AND DISCUSSION</b>		<b>17</b>
4.1	Introduction	17
4.2	Design and CAD Modelling	17
4.3	Fabrication of 3D printing Process	20
4.4	Experimental Process	22
4.5	Result	24
	4.5.1 Tensile result	24
	4.5.2 Torsion result	26
<b>CHAPTER FIVE : CONCLUSION AND RECOMMENDATIONS</b>		<b>32</b>
5.1	Conclusions	32
5.2	Recommendations	32
<b>REFERENCES</b>		<b>34</b>
<b>APPENDICES</b>		<b>36</b>