



**DEVELOPMENT OF JIG FOR COORDINATE  
MEASURING MACHINES**

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“I declare that the content present in this thesis are my own work which was done at Universiti Teknologi MARA (UiTM) unless stated otherwise. The thesis has not been previously submitted for any other degree.”

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## **ABSTRACT**

Each jig has an own design and function in order to meet the requirement. In general, the functions of jig are to guiding the cutting tool and hold the workpiece during in machining or making measurement. This project is fabricating and design a jig for Coordinate Measuring Machine (CMM) at UiTM Cawangan Pulau Pinang. A CMM is one of measuring devices in provide precise measurement. The CMM need a jig to hold and place the workpiece because the measuring probe will touch the surface of workpiece in checking measurement. The Bachelor and Diploma of Mechanical Engineering at UiTM Cawangan Pulau Pinang using CMM in their final year project and conduct the laboratory work. The CMM in Metrology laboratory is not provided with the jig and it is difficult for students in making measurement. Previously, students are using a box as a jig in order to hold and place the workpiece. The purpose of this project is to design a jig for CMM in order to assist the mechanical students in checking measurement with properly and accurate. Actually, there are many types of jig available in the manufacturing field and the development a new design of jig is needed for CMM at UiTM Cawangan Pulau Pinang. The design of CMM jig is more focus on the multipurpose of geometrical shape. On the other hands, this design can improve the ability and application of the CMM for UiTM students especially in learning and education proces

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