



**STATE UNIVERSITY OF MEDAN**

**THE EFFECT OF USING STUDENT WORKSHEETS WITH  
A STEM APPROACH ON VIBRATIONS, WAVES, AND  
SOUNDS MATERIAL ON LEARNING OUTCOMES  
OF CLASS VIII STUDENTS**

**THESIS**

**Submitted to Fulfill The Requirements for  
The Degree of Bachelor of Education**

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FACULTY OF MATHEMATICS AND NATURAL SCIENCE  
MEDAN  
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