



UNIVERSITAS NEGERI MEDAN

**THE DEVELOPMENT OF ANIMATION-BASED LEARNING
MEDIA USING ADOBE FLASH ON CHEMICAL BONDING
MATERIAL TO IMPROVE STUDENT LEARNING
OUTCOMES**

THESIS

Submitted in Partial Fulfillment of The Requirements for The Degree of
Sarjana Pendidikan

Luxy Grebers Swend Sinaga
Reg. Number 4173131021
Bilingual Chemistry Education Study Program

CHEMISTRY DEPARTMENT
FACULTY OF MATHEMATICS AND NATURAL SCIENCE
MEDAN
2021