



**THESIS APPROVAL**  
**GRADUATE SCHOOL, KASETSART UNIVERSITY**

.....  
Doctor of Philosophy (Science Education)  
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**DEGREE**

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Science Education  
.....

**FIELD**

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Education  
.....

**DEPARTMENT**

**TITLE:** Teaching and Learning in a Laboratory in Biology Course of First-Year Pre-Service Science Teachers in Accordance with the National Education Act, 1999

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