



*Building  
Future  
Leaders*



# DEVELOPMENT OF STUDENTS' 21<sup>ST</sup> CENTURY SKILLS THROUGH STUDENT MOBILITY IN INTERNATIONAL MULTIDISCIPLINARY PROJECT BASED LEARNING

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## TEAM MEMBERS

Dr. Tula Jutarosaga,  
King Mongkut's  
University of  
Technology Thonburi

**Material Science and  
Engineering, Physics**



Dr. Fauzan Khairi Che Harun, Universiti  
Teknologi Malaysia

**Electrical-Electronics Engineering**

Dr. Yuli Rahmawati,  
Universitas Negeri Jakarta<sub>2</sub>

**Chemistry Education**

# PROJECT BACKGROUND



21<sup>st</sup>  
Century  
Skills



Students' Mobility  
in International  
Multidisciplinary  
Project Based  
Learning



Malaysia,  
Thailand, and  
Indonesia



3 Phases:  
Online and  
Offline



# OBJECTIVES

- 1) **To identify elements in team dynamics** that contribute to better collaborative works among cross-cultural teams.
- 2) **To identify which 21<sup>st</sup> century skills could be developed** among the students according to this cross-cultural program.
- 3) **To identify similarities between different cultures that can bring a team together.**
- 4) **To suggest a method/framework/policies to enhance global competencies among student from different nationalities.**

# PROJECT OUT LINE

- 40 Students:  
Malaysia: 10,  
Thailand: 10,  
Indonesia: 20

## Participants

## First 2 Contact Phase

- Team member with different expertise conducts workshop in Malaysia and Thailand
- Two 3-day trainings

- Online Platform
- Basic knowledge and skills to develop their projects
- Students remotely work in groups.

## Online Phase

## Final Contact Phase

- One Week Workshop at Universitas Negeri Jakarta, Indonesia

**KMUTT and UTM will support the travel of the students in all contact phases.**

# PROJECT SCHEDULE

Date	Activities
September 2016	Discussion about the implementation plan
September 2016	Research objective and plans presented at the UMAP Board Meeting
September 2016 – January 2017	Promotion of the program
January 2017	Selection of Potential Participants and Skype meeting
February 2017	1st Training in Thailand (or Malaysia)
March 2017	Interim research outcome presented at APAIE 2017
April 2017	2nd Training in Malaysia (or Thailand)
May – June 2017	Online phase: Students remotely works on specific projects.
June/July 2017	3rd Training in Indonesia
August 2017	Complete the final report
November 2017	Submit the final report to UMAP
March/April 2018	Final report delivered at the UMAP Board Meeting

# 3 Contact phases

## 1<sup>st</sup> Phase: Design Thinking and Teamworking

- 3-day training
- Design Thinking workshop
- Team working workshop
- 20-25 Thais and Malaysians.

## 2<sup>nd</sup> Phase: Technical Engineering

- 3-day training
- Mobile Phone Apps and IoT Sensors
- 20-25 Thais and Malaysians.

## 3<sup>rd</sup> Phase: Project Management

- 5-day training
- Project Management
- Communication
- Prototype Completion
- Presentation
- 40 Thais, Malaysians and Indonesians.

**Online:** Providing Necessary Documents and Encourage the Skype Communication

\*The focus is not on the technical content itself but how they communicate their knowledge with the other team.



## BUDGET

<b>Budget Items*</b>	<b>Explanation</b>	<b>Total Funds (USD)</b>
<b>Training</b>	External Trainers for the workshop (if necessary)	800
<b>Travel and accommodation</b>	Mentors' airfare and accommodation	2,400
<b>Supplies</b>	Office Supplies, Space rental (if necessary)	300
<b>Other costs</b>	Accommodation for students in Indonesia	1,500
<b>Total</b>		<b>5,000</b>

\*Budget could be adjusted as necessary among items.



# EVALUATION OF THE PROJECT

- Evaluation by the mentors
  - Program, technical, facilitators, etc
- 21<sup>st</sup> century skills questionnaire (will be developed)—taken from the rubrics
  - Learning and Innovation (Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration,
  - Information, Media & Technology Skills (Information Literacy, Media Literacy, ICT Literacy,
  - Life and Career Skills (Flexibility and adaptability, Initiative and Self-Direction, Social And Cross-Cultural Skills, Productivity and Accountability, Leadership and Responsibility,
- Students' reflection and feedback (Focus Group Interview)