芝浦工業大學 SHIBAURA INSTITUTE OF TECHNOLOGY

AY2024 Global PBL (Inbound) Performance report

SIT+AIT+KU+KMUTT+SUT+ITB+NTU gPBL: Workshop on Resilient Infrastructure and Sustainability in Asia

Date	Place	Partner Organization	Students' Major and Grade	Participants' Information	SIT Instructor
2024/9/17 - 2024/9/26	Japan	Shibaura Institute of Technology (SIT) Asian Institute of Technology (AIT) Kasetsart University (KU) King Mongkut's University of Technology Thonburi (KMUTT) Suranaree University of Technology (SUT) Bandung Institute of Technology (ITB) National Taiwan University (NTU)	# Civil Engineering # Undergraduate 1st grade; Undergraduate 2nd grade; Undergraduate 3rd grade; Undergraduate 4th grade; Master 1st grade; Master 2nd grade	[Shibaura Institute of Technology (SIT)] Students 35; Student Staff 13; Professor 1; Staff 1 [Asian Institute of Technology (AIT)] Students 24; Professor 1; Staff 1 [Kasetsart University (KU)] Students 21; Professors 5 [King Mongkut's University of Technology Thonburi (KMUTT)] Students 13; Professor 1 [Suranaree University of Technology (SUT)] Students 4; Professor 1 [Bandung Institute of Technology (ITB)] Students 23; Professor 1 [National Taiwan University (NTU)] Students 13; Professors 2 Total: 159	Inazumi, Shinya (College of Engineering)

Fig. 1 Group photo

A global PBL on "Resilient Infrastructure and Sustainability in Asia" was held at the Toyosu Campus of Shibaura Institute of Technology. The program brought together 35 students from the Department of Civil Engineering at Shibaura Institute of Technology and participants from various Asian countries. Specifically, there were 24 students from Asian Institute of Technology (AIT), 21 from Kasetsart University (KU), 13 from King Mongkut's University of Technology Thonburi (KMUTT), 4 from Suranaree University of Technology (SUT), 23 from Bandung Institute of Technology (ITB), and 13 from National Taiwan University (NTU), making a total of 159 participants from a wide range of countries. This multinational team collaborated on projects that deepened both their technical knowledge and cultural understanding.

During the global PBL, participants had the opportunity to engage in cross-cultural experiences through various events. For example, the Yukata (light cotton kimono) workshop allowed them to experience traditional Japanese culture. This not only promoted international exchange, but also provided participants with a deeper understanding of different cultures. Such cultural exchanges not only facilitated technical discussions, but also improved overall communication. Participants also attended the Geotechnical Engineering Forum 2024 at Tokyo Big Sight, where they had a valuable opportunity to observe Japan's cutting-edge geotechnical technology firsthand. Technologies for mitigating soil liquefaction and developing disaster-resilient infrastructure were showcased, providing solutions to challenges common throughout Asia. Participation in this forum further stimulated discussion within the group's activities and helped shape technical solutions.

In addition, a special lecture was part of the program to help students gain a deeper understanding of infrastructure development and the challenges faced by Asian countries. The lecture introduced new approaches to designing disaster-resilient infrastructure and building sustainable cities, with a special focus on the need for infrastructure development that addresses climate change. This provided students with not only theoretical knowledge, but also practical perspectives on real challenges.

Participants were divided into 10 groups where they discussed "Resilient Infrastructure and Sustainability in Asia". Each group shared insights on infrastructure technology and disaster prevention measures in their respective countries. Topics included earthquake preparedness in Japan and Taiwan, and flood mitigation in Indonesia and Thailand. By pooling their technical knowledge, the groups integrated different perspectives to find innovative solutions to common problems. These discussions played a key role in understanding the technical differences between countries and developing the ability to merge different approaches to problem solving.

In the final presentations, each group proposed creative ideas and solutions based on their discussions. Many proposals were aimed at improving infrastructure connectivity and disaster preparedness across Asia. The event provided an opportunity for all participants to deepen their understanding of infrastructure resilience and sustainability in the region. By sharing their countries' technologies and knowledge with others, the students gained new insights and reaffirmed the importance of cross-regional cooperation.

This global PBL was a valuable opportunity for participants from different countries and cultural backgrounds to work together and gain new perspectives on international issues. The participants reaffirmed the importance of infrastructure resilience and sustainability in Asia, and it is hoped that they will apply the lessons learned to their future studies and careers.

Fig. 2 Students listening to a lecture

Fig. 3 Group activity

Fig. 4 Forum participation

Fig. 5 Cross-cultural exchange

Fig. 6 A light meal party

Fig. 7 Students during their final