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Systems Thinking and Engineering-based 'Global Project Based Learning'

The mission of Shibaura Institute of Technology (SIT) is to foster engineers and scientists who can learn from the world and contribute to global sustainability. Fortunately, our proposal of the Project for Promotion of Global Human Resource Development was approved for a grant by the Ministry of Education, Culture, Sports, Science and Technology in the 2012 competition. With this support, SIT aims to globalize our whole university and provide opportunities for students to acquire the four competency areas — communication skills, global leadership skills, intercultural understanding skills and problem-solving skills—necessary for global human resources.

Because of this situation, we developed a global Project Based Learning (PBL) educational program based on systems thinking and systems engineering through multidisciplinary and undergraduate graduate collaboration. We started the global PBL educational program by collaborating with King Mongkut's University of Technology, Thonburi in Thailand. Additionally, to validate learning outcomes of this program in terms of a generic skill assessment, the progress report on generic skills (PROG) was performed.

Moreover, it was confirmed that the competency of generic skills of the member who participated in the global PBL had improved. We believe that successful students in this program will acquire comprehensive capacity of problem solving, which is required when they work as a member of an international and/or interdisciplinary team, through synthetic problem-solving experience. In this presentation, we talk about the outline of this educational program of the global PBL.