

Report on the PME Intensive Course at the Asian Institute of Technology in Vietnam, Ho Chi Minh City

Representative: Hiroyasu Ohtsu

Date: March 28 - April 2, 2011

Place: Asian Institute of Technology in Vietnam (AITVN), Ho Chi Minh City

Organized by the Global COE Program “Global Center for Education and Research on Human Security Engineering for Asian Megacities”

Number of Participants: 19

From March 28 to April 2, 2011, a six-day intensive course was held on Risk Management for Infrastructure Development and Planning, a course within the Professional Master of Engineering (PME) program offered to practitioners, at the Asian Institute of Technology in Vietnam (AITVN), Ho Chi Minh City, a satellite center of the Asian Institute of Technology (AIT), one of the overseas bases of the Kyoto University Global COE Program “Global Center for Education and Research on Human Security Engineering for Asian Megacities (GCOE).”

Among the four research fields of the GCOE program (Urban Governance, Urban Infrastructure Management, Health Risk Management, and Disaster Risk Management), I serve as a research field leader of Urban Infrastructure Management. The focus of the course was one of the disciplines in this field, geotechnical infrastructure asset management. The course was held according to the agenda given in Table 1, with each lecture consisting of a 90-minute session for a total of 21 hours including the final exam. As text material, I used a publication I compiled for the GCOE program, Geotechnical Infrastructure Asset Management (Second Edition).

Table 1: Lecture Agenda

No.	Date	Contents
1	March 28 (Mon)	Introduction Urban Infrastructure Asset Management
2	March 28 (Mon)	Risk Analysis (1) Risk Definition
3	March 29 (Thu)	Risk Analysis (2) Expectation & Standard Deviation
4	March 29 (Thu)	Risk Analysis (3) Portfolio
5	March 30 (Wed)	Risk Analysis (4) Evaluation of Probability of Occurrence
6	March 30 (Wed)	Risk Analysis (5) Evaluation of Occurrence Probability
7	March 31 (Thu)	Slope Risk (1) Slope Risk Evaluation Using ET
8	March 31 (Thu)	Slope Risk (2) Evaluation of Probability of Slope Failure
9	April 1 (Fri)	Slope Risk (3) Rainfall Hazard & Direct & Indirect Loss
10	April 1 (Fri)	Slope Risk (4) Annual Probability of Slope Failure Risk (1)
11	April 2 (Sat)	Slope Risk (5) Annual Probability of Slope Failure Risk (2)
12	April 2 (Sat)	Slope Risk (6) Landslide Early Warning
13	April 2 (Sat)	Final Exam. (1)
14	April 2 (Sat)	Final Exam. (2)

course, all participants were professional engineers with a keen interest in not only theories but also practical application. With this in mind, in each lecture I distributed practical exercises to be solved using Excel software, which were highly welcomed as they both furthered understanding and could be used in real-life business. I firmly believe that winning the participants’ understanding, even in an introductory course for practitioners, is valuable in spreading knowledge about the field in the future.

During the course, on March 29 the AITVN held a conference on Geotechnical Engineering in the Context of Climate Change for university faculty members, government officials, and engineers. I gave a special lecture titled “Monitoring and Early Warning of Landslides: Experiences in Japan and Thailand” and spoke about the in situ monitoring I conduct in Thailand as part of the GCOE program, and the early warning system I propose for landslides. The proposal, which reflects the increasing frequency of slope disasters in Southeast Asia due to variations in rainfall pattern as a consequence of climate change, received many responses and set in motion an active question and answer discussion.

I plan to continue grasping opportunities like this to spread knowledge about relevant fields in Asia and to share information from the perspective of human security engineering.



Group picture

This intensive course was the second of its kind, following the first in September 2009. In the previous

アジア工科大学ベトナム・ホーチミン分校 PME 集中講義報告

代表者： 大津 宏康

開催日時： 2011年3月28日 - 4月2日

開催場所： ベトナム分校 AITVN (ベトナム・ホーチミン)

主催： 京都大学グローバル COE プログラム「アジア・メガシティの人間安全保障工学拠点」

参加人数： 19名

平成23年3月28日から4月2日の6日間、京都大学グローバル COE プログラム「アジア・メガシティの人間安全保障工学拠点」(以下、京都大学 GCOE プログラムと称す)の海外連携拠点の一つであるアジア工科大学 AIT のベトナム分校 AITVN (Asian Institute of Technology in Vietnam)・ホーチミンにおきまして、社会人修士課程 PME (Professional Master of Engineering) 科目「Risk Management for Infrastructure Development and Planning」の集中講義を実施しました。

本講義では、GCOE プログラムの主要4領域(都市ガバナンス・都市基盤マネジメント・健康リスク管理・災害リスク管理)の内、筆者が研究領域リーダーを務める「都市基盤マネジメント」分野におけるサブプロジェクトである地盤構造物を対象としたインフラ構造物のアセットマネジメントに関する内容に関して、表-1に示すプログラムで講義を実施しました。同表に示します1コマ当りの講義時間は90分ですので、Final exam.を含めて計21時間です。また、講義のテキストとしては、筆者が作成した GCOE プログラムの成果出版物である Geotechnical Infrastructure Asset Management (Second Edition) を使用しました。

表-1 講義プログラム

No.	Date	Contents
1	March 28 (Mon)	Introduction Urban Infrastructure Asset Management
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いて、受講者がすべて社会人エンジニアであり、理論に加えて実務面への応用への関心が高かったことを踏まえて、各回の講義において EXCEL を用いて解く演習問題を配布し演習を実施した所、理解が進むことに加え実務にも生かせることが出来ると大変好評でした。社会人対象の入門編の講義内容とはいえ受講者の理解を得ることは、将来的に当該分野の知識の普及を図る上で有益であると確信しています。

また、本講義期間中の3月29日には、AITVN 主催で大学教員・政府関係者・エンジニアを対象として The conference on Geotechnical Engineering in the context of Climate change という講演会が開催され、「Monitoring and early warning of landslide, experiences in Japan and Thailand」という題目で特別講演を行いました。内容は、筆者が GCOE プログラムでタイにおいて実施している原位置モニタリング、および土砂災害早期警戒体制の立案に関するものです。昨今、東南アジア諸国では気候変動の一環とみなされる降雨の発生状況の変化に伴う斜面災害の発生頻度が増加しつつあることを反映して、土砂災害早期警戒体制の立案に関しては多くの質問がなされ、活発な質疑応答となりました。

今後とも、このような機会をとらえて、アジア地区での当該分野の知識の普及、および人間安全保障工学の観点からの情報の共有化を図っていきたくと考えています。



なお、本科目の集中講義は、2009年9月に実施しており今回が2回目となります。前回の講義にお