4th International CDIO Conference

ACTIVE ENGINEERING EDUCATION

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Title Benchmarking Vietnam's IT-Engineering Programs for Curriculum Design

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Type of Presentation: (check one)

_____ active paper (15-30 min)
__x___ poster session (60 min)
_____ advanced workshop (45 min)
_____ round-table session (60 min)
_____ advanced workshop (90 min)

Short Description This poster session, "Benchmarking Vietnam's IT-Engineering Programs for Curriculum Design", addresses how universities in Vietnam can best meet the needs of industry by linking CDIO-based learning outcomes and workforce preparation. Learning objectives: 1) introduce industry's expectations for Vietnamese graduates and universities' standards; 2) introduce higher learning education issues in Vietnam.

Relevance to the Conference Theme, Strands, and/or CDIO Initiative

Please indicate (tick) the strand that the presentation most closely relates to.

Application of CDIO to a wide range of disciplines
X The involvement of industry
X Development of professional competences
Design-implement experiences
Curriculum and programme design
Technology-enhanced learning
Assessment of professional competences
X Facilitating change in engineering education

X Supporting sciences and CDIO	Evaluating the impact of CDIO Programs
Student involvement	Active and experiential learning

Abstract A systems engineering approach is employed in this project to address how universities in Vietnam can best meet the needs of industry. This approach involves having the industry partners, who are consumers of the universities' graduates, articulate a set of requirements (of skills, knowledge, attitudes) that they wish the graduates to possess. The universities then would use this requirements document as the basis to benchmark their programs and determine ways to reform their curriculum to produce graduates who have the attributes that industry partners are seeking. A mixed qualitative and quantitative research methodology was employed, which consists of the following three tasks: a) Identifying the full set of skills, knowledge, and attitudes (SKA) which students should possess as they graduate from IT and engineering departments; b) Defining the level of proficiency for each set of SKA; and c) Comparing the existing curriculum with the identified requirements and recommending ways to integrate new requirements into the curriculum. Survey data was used to analyze the degree of agreements/disagreements among the stakeholder groups and possible ways to align them; and to identify any inadequacies in having the Syllabus SKA sets taught in the existing classes, using data obtained from faculty members' evaluations. Based on the results of this analysis, recommendations were made for integrating the SKA sets into the curriculum in a consistent manner.

Active presentation techniques

Describe one or two ways in which you intend to engage the audience (for example, paired discussion, personal response using clickers or flash cards …). This section is a decisive factor in the acceptance of your proposal and the amount of time you will be allocated.

Active presentation technique(s) to be used: For my poster session, I would like to

1. One-on-one or group Questions & Answers sessions.
2. Using flip charts and post-it notes, participants will be asked to compare and contrast their perceived gap between the industry's expectation of the graduates and the universities' standards in their respective countries.

Facilities/equipment required (tick all those appropriate)

X Computer projector (provided in all locations)
Overhead projector
X Flip charts and pens
Clickers (personal response system)
Coloured flash cards
X Post-it notes
Other (please describe)