From Vision to Action: CDIO-reform for engineering programs at Blekinge Institute of Technology

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ABSTRACT

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Type of contribution: explore session

In this session we would like to present and discuss how on a program-cluster level we at BTH have worked with a CDIO approach (Crawley *et al.* 2014) to develop the engineering programs that better educate engineers who "are ready to engineer." At a highly profiled institute with civil engineering programs and an aim to convert Bachelor of Science into Bachelor of Science in Engineering. We have the intention to reform all our programs to better meet the requirements from industry and society in terms of graduating students who are better prepared to meet the challenges at a workplace and its context. We believe that reform work and development of a cluster of programs simultaneously will give us benefits like:

- o Cooperation effects
- o Coordination effects
- o A common ground for what engineering means
- o Possibilities to share good practice across subject and department borders

We have come to believe that these benefits in turn and taken together lead to higher-quality programs (Cardenas *et al.* 2013).

Through a number of activities we have worked with a selection of the standards that constitute the CDIO-approach trying to combine them in order to be efficient. These are:

Standard 3. (Towards an) **Integrated curriculum**

Standard 4. **Introduction to Engineering**

Standard 7. **Integrated learning experiences**

Standard 8. **Active Learning**

Standard 10. **Enhancement of faculty teaching competence**

Standard 12. **Program evaluation**

Our aim during this session is to explore our experiences with the work-in-progress of converting a Bachelor program and adapting it to CDIO, focusing on standards 8 and 10. And, we wish to discuss benefits, obstacles and difficulties that we have come across as well as future possibilities with our approach.

REFERENCES

Cardenas *et al.* (2013). Bringing Active Learning into Engineering Curricula: Creating a Teaching Community. *Proceedings of the 9th International CDIO Conference, Massachusetts Institute of Technology and Harvard University School of Engineering and Applied Sciences, Cambridge, Massachusetts, June 9 – 13, 2013.*

Crawley *et al.* (2014). *Rethinking Engineering Education: The CDIO Approach.* Springer. London.