

Higher Education Development

A workshop for university teachers in Moldova

The aim of this workshop is to provide a modern framework for developing engineering education. It is customised for university teachers, and also suitable for educational leaders and developers. The language is English, with simultaneous translation available (Romanian). The duration is two days, full time, and we use a mix of lectures, seminars and workshops. As preparation, some selected literature is provided in electronic format.

The CDIO Approach

The focus of this workshop is program and course development inspired by the CDIO framework. The CDIO approach for education development aims to better prepare students for professional practice, by enhancing student learning and motivation. The curriculum development methodology integrates development of professional skills with the acquisition of disciplinary fundamentals throughout the program. KTH is one of the original founders of the CDIO Initiative, together with MIT in the United States and two other Swedish universities – Chalmers and Linköping University. It is a dynamic community with more than 130 institutions as collaborators (see www.cdio.org).

The KTH team



Anna-Karin Högfeldt is a Lecturer in *Higher Education Development* and Director of Faculty Training at KTH School of Education and Communication in Engineering Science. She is involved in Nordic and International/cross-continental education evaluation, development and research projects. She is a coauthor of *Guide to Challenge Driven Education*, written for a project with partners in East Africa. At KTH, she has worked ten years to support management, schools, education program directors and individual teachers to strengthen education and system level approaches. She has a Master of Education in Mathematics and Swedish language and literature, and has taught in every school level including university, mainly in Mathematics.



Kristina Edström (kristina@kth.se) is an Associate Professor in *Engineering Education Development*, at KTH School of Education and Communication in Engineering Science. She has a M.Sc. in Engineering. She leads educational development activities in Sweden and internationally, most notably in the CDIO Initiative since 2001. She serves on the CDIO Council. She was also Director of Educational Development at Skolkovo Institute of Science and Technology, Moscow, 2012-2013. At KTH, she has taught over 800 faculty members in courses on teaching and supervision. Kristina received the KTH Education Prize in 2004 and was elected honorary member of the KTH Student Union in 2009.



Margareta Bergman (margberg@kth.se) is *Director of Studies* and administrative coordinator of the unit for Teaching and Learning in Higher Education, at KTH School of Education and Communication in Engineering Science.

Preliminary Schedule

| Tuesday, 13 June | | |
|-------------------------|---|-----|
| 10.00 – 11.00 | Introductions <ul style="list-style-type: none"> ▪ Participants and facilitators ▪ Expectations ▪ How this activity will work ▪ Higher education in Sweden and at KTH ▪ Educational development at KTH | AKH |
| 11.00-11.15 | Coffee break | |
| 11.15 – 13.00 | Lecture: CDIO – the Idea, Methodology and Community CDIO is explained from three perspectives. First of all, it is based on an idea regarding what engineering students should learn and why. Then, it is a methodology for curriculum and course development. Finally, the CDIO Initiative comprises over 130 universities (see www.cdio.org) and is a dynamic community for engineering educators. | KE |
| 13.00 – 13.30 | Lunch | |
| 13.30 – 15.00 | Seminar: Feedback and feed up session – what are the visions and how do we meet them so far? Discussions in mixed teams based on pre-lunch session in relation to the various HE fields involved. | AKH |
| 15.00 – 15.15 | Coffee break | |
| 15.15 – 17.00 | Seminar: Feedback and feed up session – what are the visions and how do we meet them so far? (continuation) | AKH |

| Wednesday, 14 June | | |
|---------------------------|---|------------|
| 09.00 – 10.30 | Interactive lecture: The Teaching Trick – How to improve student learning without spending more time teaching The key principle is that teachers should spend more of their time doing things that lead to high quality learning, and less time on such things that do not lead to learning. Concrete examples will be used to illustrate the principle, challenge old ways of thinking, and question some taken-for-granted practices. | KE |
| 10.30-10.45 | Coffee break | |
| 10.45-12.00 | Interactive lecture: The Teaching Trick – How to improve student learning without spending more time teaching (continuation) | KE |
| 12.00 – 13.00 | Reflective workshop: Strategies for change I Each institution gathers for a workshop where ideas are categorized and prioritized. | AKH |
| 13.00 – 13.30 | Lunch | |
| 13.30 – 15.00 | Feed forward: Strategies for change II An interactive session where possible strategies for change are discussed, regarding curriculum, faculty as well as organizational development. | AKH |
| 15.00-15.15 | Coffee break | |
| 15.15 – 16.00 | Q&A. Summary | KE, AKH |

AKH – Anna-Karin Högfeldt

MB – Margareta Bergman

KE – Kristina Edström