



**Boosting the role of HEIs in the industrial transformation towards the Industry 4.0
paradigm
in Georgia and Ukraine
609939-EPP-1-2019-1-BE-EPPKA2-CBHE-JP**

STUDY VISIT



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Enhancing Higher Education Program

16 – 20 October 2023

KTH Royal Institute of Technology, Stockholm, Sweden

Monday 16 October (Room: Salongen, KTH Main Library Building)		
Time	Activity	Who
09:00	Introduction Welcome and general information on how the week will work. Round of presentations of participants and facilitators	EK
9:15	Enhancing Higher Education – Strategies for change at KTH Organisational development to enhance education	AKH LK
10:30	Quality Assurance – Quality Assurance from national to course level This workshop goes over ways to support and administer the quality assurance system in higher education, including the processes, to achieve high quality education and research.	AKH IWÖ
12:00 – 13:00	<i>Lunch</i>	
13:15 – 16:00	Enhancing Higher Education – Faculty training and education development support at KTH This workshop aims to share and explore visions and actions applied to the enhancement of higher education at KTH. Some of the topics for discussion are: <ul style="list-style-type: none"> • Arenas for education • Faculty development • Collaborations with society • Students' active involvement in the development of education 	AK
17:00 – 19:00	<i>Welcome Reception at KTH Central Administration office</i> Brinellvägen 8, 11th floor	

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Tuesday 17 October (Room: Salongen, KTH Main Library Building)

Time	Activity	Who
09:00 – 12:00	<p>Education for Sustainable Development – societal challenges, theory and concepts, the role of education</p> <p>The urgent need for transformation towards a sustainable society requires changes in higher education institutions. This session introduces and gives various perspectives on the concept sustainable development and explores how it may influence higher education. Hands-on workshop on societal challenges and sustainable development goals.</p>	AR AKP
12:00 – 13:00	<i>Lunch</i>	
13:15 – 16:00	<p>Education for Sustainable Development – approaches and applications</p> <p>Insights in how KTH works systematically with integrating sustainable development in educations, including policies, frameworks, approaches, and concrete examples of courses and programs. Hands-on workshop where the participants explore some of these frameworks and approaches in relation to their own courses and programs.</p>	AR AKP CD

Wednesday 18 October (Room: Salongen, KTH Main Library Building)

Time	Activity	Who
09:00 – 12:00	<p>Digital Learning in Higher Education – Institutional strategies for digital transformation of higher education – Using digital technologies to enhance learning – Make your digital content pedagogical and accessible</p> <p>This session will include presentation and discussion of digital learning in higher education, starting with the perspective of strategies and approaches on the institution/university-level, going further to the course-level on how teachers can make the best use of the possibilities that digital technology provides, and finally practicalities on how to create digital content that is both pedagogical and accessible. We will discuss theories, research, and provide examples, that can improve our understanding of how to design high quality education supported by digital technologies.</p>	FE SS
12:00 – 13:00	<i>Lunch</i>	

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13:15 – 16:00	<p>Rethinking Engineering Education – The CDIO approach</p> <p>The aim of CDIO is to better align engineering education with professional practice and with student motivation, while also providing a deeper working understanding of the technical fundamentals. The CDIO Initiative was founded by MIT, KTH and two other Swedish universities, and it is now a community of more than 200 institutions worldwide. This community has created a methodology for curriculum development. The strategy is to integrate students' development of professional competence with their acquisition of technical knowledge, with progression throughout the program. We will investigate the CDIO approach through examples of its implementation at KTH and Chalmers.</p>	KE
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Thursday 19 October (Room: Salongen, KTH Main Library Building)		
Time	Activity	Who
09:00 – 12:00	<p>Cost-effective educational development – How to improve student learning while limiting teacher workload</p> <p>It is common to assume that the new ways of teaching that we are discussing during this week would require a higher teaching effort. Therefore, we will consider how to improve student learning using the time that we already have for teaching and assessment. We will use concrete examples to illustrate some very useful principles, challenge old ways of thinking and question some taken-for-granted practices in education.</p>	KE
12:00 – 13:00	<i>Lunch</i>	
13:30 – 14:30	Guided tour of KTH campus	EK
15:15 – 16:00	<p>Strategic partnerships – Industry-academia collaboration</p>	JB

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Friday 20 October (Room: Salongen, KTH Main Library Building)

Time	Activity	Who
10:00 – 10:15	Fika and reflections <ul style="list-style-type: none"> Engineering Education curriculum development Digital learning in higher education Education for Sustainability Faculty development Organizational development Quality Assurance Strategic partnerships – industry-academia collaborations 	MR
10:15 – 10:35	Student influence at KTH – Student influence as a fundamental part of a university's development.	
10:40 – 11:30	The Framework for Future Education at KTH – A change programme to structure KTH's education development work with a long-term holistic perspective.	
	Closing ceremony – Certificates	
12:30 – 13:30	<i>Lunch</i>	

Program coordinator

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AR – Anders Rosén

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CD – Charlotta Delin

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EK – Elizabeth Keller

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FE – Fredrik Enoksson

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JB – Johan Blaus

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KE – Kristina Edström

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LK – Leif Kari

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PF – Per Fagrell

<https://www.kth.se/profile/perfag>

SS – Stefan Stenbom


<https://www.kth.se/profile/stkn>

THS – Student Union, Maja Rosén






<https://dev.thskth.se/en/education>

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KTH Enhancing Higher Education 2023

	<p>Dr. Anders Rosén is an Associate Professor in Engineering Education at the KTH Royal Institute of Technology. Special focus on sustainability education, challenge-driven education, and educational transformations, through research, development, and teacher training. Leading roles in promoting, supporting, and evaluating, the integration of sustainable development in education at KTH, and in enhancing the CDIO framework with regards to sustainable development. Deputy Director of the KTH Global Development Hub which is a collaboration between KTH and universities in Botswana, Kenya, and Tanzania, on mutual capacity building through challenge-driven education, innovation, and research. Engineering background with a PhD in Naval Architecture.</p>
	<p>Anna-Karin Högfeldt is the head of the Unit Learning in STEM. She is a teacher, educational developer, and carries out research studies on local and international levels. The main aim with her work is to support academics at KTH to enhance education on all levels, to meet the needs of education transformation for the changing needs in society. She is one of the main authors of the book Guide to Challenge Driven Education, which originates from a collaboration project with partners in East Africa. At KTH, she has worked strategically to support management, schools, education program directors and individual teachers to strengthen education and system level approaches for many years. She holds a Master's degree in Education, in the specializations of Mathematics and Swedish language and literature. She has been working as a teacher on all school levels including university, mainly in the field of Mathematics. At KTH, Anna-Karin has developed Teacher training courses for PhD-students and faculty, both in the general field of Teaching and Learning, and in specific fields/topics, such as Grading criteria and assessment, Supervision, and Sustainable Development.</p>
	<p>Dr. Anne-Kathrin Peters is an Associate Professor in technology education at KTH Royal Institute of Technology. She works with the role of education and technology for change towards sustainability. Her research focus is norms, values, identities, and power relations in education. Anne is supporting pedagogical development and is educating teachers at KTH. Until recently, she was a researcher and teacher at the IT department at Uppsala University (UU). At UU, she coordinated the Climate Change Leadership initiative, establishing cross-disciplinary research collaborations on societal transformation and climate action. Anne has a computing and teaching degree from Germany and has worked as a teacher in high school.</p>
	<p>Charlotta Delin is a pedagogical developer at KTH. The work focuses on educational development, with a particular focus on gender equality, diversity, and equal conditions. Charlotta teaches, gives workshops, coaches, and works strategically to integrate social sustainability into the content, design and implementation of educational programs. Charlotta also works with values-based issues and provides support for change processes so that the culture at KTH is characterized by gender equality, diversity and equal conditions.</p>

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	<p>Dr. Fredrik Enoksson is a senior researcher at the department of Learning in Engineering Sciences, KTH Royal Institute of Technology. He teaches in courses on digital learning in higher education and within the teacher programs at KTH, supervises PhD students, and carries out research on digital learning and digital transformation within different educational settings. Fredrik also hold a central appointment as the manager of the e-learning management object, with focus on the pedagogical use of the digital learning environment at KTH. Over the years he has been involved in several research and development projects where digital tools have been one important part of enabling or enhancing teaching and learning experiences, examples of contexts and subjects include Internet-based cognitive behavioral therapy, organic agriculture, digital cultural heritage, hematology and higher education.</p>
	<p>Dr. Inger Wikström Öbrand is a Quality Assurance Officer with the main responsibility to coordinate and support quality work at KTH and to ensure that KTH works according to the Swedish University act, The Higher education Ordinance and the European Standards and Guidelines for Quality Assurance in the Higher Education area (ESG).</p>
	<p>Dr. Joakim Lilliesköld is an Associate Professor in Industrial Systems Engineering at KTH Royal Institute of Technology. He has vast knowledge in systems engineering management. Since December 2022 he is the Programme Manager for the change programme Future Education at KTH. Future Education at KTH is a change programme with a framework that will help us to be proactive and structure our development work of KTH's education based on a long-term holistic perspective.</p>
	<p>Johan Blaus is a Senior Advisor to KTH Management, and is involved in strengthening KTH's strategic partnerships program. As a Director of Strategic Partnerships, he plans and facilitates annual management dialogues of larger initiatives. Johan has managed and coordinated several international initiatives, and is involved in a large number of assessment exercises, steering committees, project teams and platforms.</p>
	<p>Dr. Kristina Edström is an Associate Professor in <i>Engineering Education Development</i> at KTH Royal Institute of Technology. Since 1997 she leads and participates in educational development activities at KTH, in Sweden and internationally. She is active in the CDIO Initiative since 2001, and is Editor-in-Chief of the <i>European Journal of Engineering Education</i> since 2018. Kristina was awarded the KTH Prize for Outstanding Achievements in Education in 2004 and elected lifetime honorary member of the KTH Student Union in 2009. Kristina has a M.Sc. in Engineering from Chalmers, and a PhD in Technology and Learning from KTH. Her research takes a critical perspective on the why, what and how of engineering education development.</p>

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	<p>Dr. Leif Kari is Vice president for Education at KTH Royal Institute of Technology. Former Head of School of Engineering Sciences between 2013-2019. He is a Professor in Engineering Acoustics with primary research interest in structure-borne sound. He has about 35 years of experience with teaching at KTH including being a program director in a master's program in Sound and Vibration and 5-years program in Engineering Physics, director of undergraduate studies at the Department of Aeronautical and Vehicle engineering. He is involved in educational conferences and started the network for program directors at KTH together with Anna-Karin Högfeldt.</p>
	<p>Dr Per Fagrell is project manager at KTH Management Office with a speciality in educational development. He works as the program coordinator for the change programme Future of Education at KTH. Future Education at KTH is a change programme with a framework that will help us to be proactive and structure our development work of KTH's education based on a long-term holistic perspective.</p>
	<p>Dr Stefan Stenbom is an Associate Professor of Learning in Engineering Sciences at the Division of Digital Learning, Department of Learning in Engineering Sciences at KTH Royal Institute of Technology. His research focuses on analyzing online and blended learning environments, with a particular interest in the Community of Inquiry theoretical framework. He conducts research in various educational settings, including K-12, higher education, and life-long learning. Additionally, Stefan holds the position of chair for the portfolio dedicated to the digitalization of education, leading and guiding strategic endeavors at KTH. Stefan teaches courses in digital learning and supervises doctoral students.</p>
	<p>Elizabeth Keller teaches a Higher Education pedagogical course for doctoral students at KTH. Previously, she taught English for Specific Purposes and Portuguese as a second language for a number of years in different countries. At the Division Learning in STEM, she supports the management of the Department of Learning in Engineering Sciences and coordinates the Enhancing Higher Education programme. Elizabeth is involved in different international projects and is active in the CDIO network, where she is currently working on a framework for Curriculum Agility.</p>

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