



A Panoramic View of Strategy, Organisation and Practice in Continuing Engineering Education

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Conference Key Areas: *Continuing engineering education (CEE); CEE practice; CEE strategies*

INTRODUCTION

For decades, life-long learning has been a well-known concept which has gradually grown in importance as we move away from (just) front-loading education to e.g., continuing training of professionals. Nowadays, industries as well as individuals, including professional engineers, are increasingly requesting new skills and competences also at an academic level. To some extent, the continuing education programmes offered by universities meet these needs, but increasing demand for tailored and flexible programmes and micro-credentialing is pressing for new responses in meeting these demands.

Junior and experienced engineers alike will experience the demand, and the need, to continuously assess and close the skills and competence gaps as they arise. How are we, and how will we, - the continuing engineering educators and administrators - respond to it?

WORKSHOP FOCUS

Continuing Engineering Education (CEE) is often referred to as universities' third mission or outreach activity. However, CEE activities are most often part of university strategies aiming at e.g., interacting with society; cross-collaboration with companies; research collaboration; knowledge exchange etc. Many universities offer



CEE programmes, but the programmes offered differ greatly, and in general, collaboration with public and private companies is a relatively new and limited 'business' for most universities. In recent years, however, new methods and paradigms for continuing education (knowledge flow) have been developing at European universities. These are initiated by EU and national programmes, and aim at upgrading the workforce e.g., to meet the skills and competence requirements derived from the SDGs and Industry 4.0.

This workshop is based on research conducted in a Strategic Partnership funded by the Erasmus+ programme. The project 'STEM skills and competences for the new generation of Nordic engineers' (Nordic engineers) in the period 2018 to 2021[1].

As part of the study, Nordic engineers conducted a mapping of the activities within CEE at Scandinavian universities - this was based on data from 10 different technical universities in the five Scandinavian countries. The study aimed at mapping the strategies and current practices of CEE, and also on identifying trends in cross-collaboration and new paradigms for knowledge flow between universities, industries and professional engineers.

With inspiration from the Nordic engineers, this workshop will facilitate the participants in conceptualizing and sharing their knowledge of CEE and will contribute to building a strong community in the SEFI SIG for CEE and LLL [2].

DURING THE WORKSHOP

This workshop aims to gather researchers, administrators and practitioners in the field of continuing engineering education and lifelong learning to brainstorm on several paths for the future practice, organization and strategies of CEE.

The 60-minute workshop will be divided into six sections:

1. Presentation of the current situation of CEE in a Scandinavian context.
2. Brainstorming discussions in groups and the conceptualization of CEE
3. Scouting and presentation on concept mapping
4. Knowledge sharing session in groups on CEE practice and CEE strategies
5. Presentation by each group
6. A list of work to be done by the participants, as the workshop outcomes are summarized.

AFTER THE WORKSHOP



At the end of the workshop, participants are expected to experience the following outcomes:

- An elaborated understanding of the CEE concept
- Knowledge on how CEE is practised and organised at various universities
- Knowledge of different CEE strategies
- A framework developed by the participants themselves on CEE and network of CEE interested colleagues

Based on the workshop outcomes and group presentations, we will explore the possibility to write and submit a proposal (paper, project etc.) together with the participating attendees the workshop.

REFERENCES

- [1] <https://nordicengineers.org/>
- [2] xx, A Panoramic View of the State of Continuing Engineering Education in Europa. IACEE World Conference 2022 Buffalo