

SEFI Special Interest Group / Working Group on Attractiveness of Engineering Education

The ideology of the SIG is based on spreading the information that Engineering is an essential role when solving the global challenges of climate change, sustainable development, pollution, digitalization, transportation etc.

The SIG has continued to build connections to other SEFI SIGs, CDIO network and IACEE, as attractiveness is an issue covering the whole lifetime from pre-university, university and careers, having several directions of professional development. Furthermore different pedagogical models and quality issues play an important part in building attractiveness of Engineering.

Work to identify and discuss the renewal of the agenda - finding issues that the SIG/WG members are interested in discussing and into which they are willing to put real effort continues. The aim is to create an active network and discussion forum, which offers members possibilities to find partners for potential project applications. An especially close cooperation has been established with the WG CEE.

The concrete work of the SIG has centered around it's Erasmus supported project ASTEP2030. Several presentations, workshops and virtual meetings of the project have been organized. The core of the project is (i) to identify future competences required for attractive engineering work in enterprises of the 4th industrial revolution and (ii) find ways for universities to develop those competences in students. That study is being done in European context, appreciating that there are different challenges in different parts of Europe. Additionally the values of the new generation are carefully analysed.

<https://www.astept2030.eu/en>

The WG has still decided to keep all the earlier listed issues in the agenda. New additions will be welcomed to the following ones currently covered in this working group:

- what makes engineering education/profession attractive?
 - o easiness, not much reading/difficultness, challenges
 - o appreciation of the profession, high income
 - o possibilities to solve the most difficult human challenges
 - o save the world
 - o possibilities of changing career
 - o is there a conflict between the reality, values and reputation?
- what is happening before the university level?
 - o the role of teaching
 - o stem versus other subjects
 - o gender attitudes
 - o attractiveness examples from real life
- What happens in the university?
 - o curricula
 - o teaching and learning
 - o diversity
 - o university as a community
 - o restrictions of study, tuition fees
- How continuing engineering education could be attractive?
 - o should an engineer work in an engineering field?
 - o how to keep the market value

We are open to add or delete issues to this list - hoping to develop a vibrant network around attractiveness.

Helsinki the 19th July 2020

Katriina Schrey-Niemenmaa