

Engineering education within the building of the European Higher Education Area

Sebastião Feyo de Azevedo, professor of Chemical Engineering, Rector of the University of Porto, Porto, Portugal; sfeyo@reit.up.pt

Which new concepts, which new models have been developed over the past twenty to thirty years, in the World and in Europe, concerning Engineering Education?

Many new concepts have emerged, some new models are developing, as a natural answer to the tremendous advances in science and technology and to the political changes that took place and came to life in these past thirty years, and indeed that took the form of a quiet revolution that led to the building of the European Higher Education Area.

The conference will address such main questions.

The first issue is of course that of the changes in society that led to a young generation, ‘the millennials’, with an ever growing holistic thinking and with expectations that require adapting of structures, concepts and mindset of those responsible for education.

I shall then revisit some main concepts of qualifications frameworks and quality assurance, the two key issues that promote Trust, the basis for cooperation and mobility. Here, I shall discuss the concept of a three-layer qualifications frameworks and how it applies to engineering education in Europe.

Finally, I shall examine instruments for new pedagogy, necessarily addressing the concept of ‘learning without boundaries and without walls’, a very rapid change, hard to absorb by the ‘Boomers’ and even by the ‘Generation X’, resulting from the evolution of the digital technologies.

Today, as in the past, the issue is to train and widen the scope of thinking of young people. The difference from the past and the difference for the future is that ‘millennials’ will live longer, will work longer, will have to study longer, more and more will have to work away from the original home, indeed will have to think global, just to the dimension of Earth or even beyond...