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Enhancing Engineering Education and its Role into the European Professional Scenario

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The paper introduces at first the continuous evolution in which Engineering Education (EE) in Europe is developing its many facets, i.e. under the stimulus of economic globalisation, of the Bologna Process, and of many other factors. Helping guiding this evolution towards a better and better system for EE, or more exactly towards a set of systems, is the ambition to adopt in order to contribute to the development of the EHEA.

Furthermore the attractiveness of Engineering Education will be dealt with, in its close relationship with the adaptation of the study programmes to the requirements of a changing society. Especially in Science and Technology the best balance between the hard skills demanded by the discipline and the generic skills of the profession needs to be found in order to better satisfy the expectations of the industry.



The paper will also draw a rough response to a key question: how to prepare students for entrepreneurship and facilitate their competitive and effective role into the professional world emphasizing first the urgency of changing the learning methodology? For instance more attention needs to be paid to vertical mobility (at the transition from bachelor to master cycle for example), to joint international programmes and to the establishment of a European Systems of accreditation of 1st and 2nd level courses of study. Further progresses must be strongly supported in these and other fields. Accreditation Systems do indeed play a key role as an element for attracting students.

Although EE and Research in Europe is generally well recognised worldwide, the attractiveness of EHEA and its degree of efficiency and innovation is still not at the most advanced stage (if compared with other major regions of the world).

In order to promote its recognition in Europe, as it already happens in other regions of the world, EE needs to be treated as a true research area: this issue is also treated in the paper. In fact in order to develop the potential of European Higher Education institutions it is of paramount importance to identify aspects of the learning process where innovation is needed, developing the required research activities. These will require the contribution of researchers from the EE community as well as from other fields, as for instance social sciences and psychology, whenever possible already active in the study of the learning processes in science and engineering. ■

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