

## Information

on the CLAIU-EU Conference “*The Bologna Process and the Engineering Education*”,

Bologna 11<sup>th</sup> – 12<sup>th</sup> April 2013

An international non-profit Association has been founded by the name of “*Council of Associations of long-cycle Engineers, of a university or higher school of engineering of the European Union*”, abbreviated to “CLAIU-EU.” The Association represents all the long-cycle engineers, i.e. defines engineers who have completed long-cycle theoretically scientific studies in-depth and who are therefore highly competent in the fundamental concepts and in putting these into practice.

CLAIU-EU provides a Forum for consultation and collaboration within Europe among associations of engineers who have broadly been educated to Master degree level.

The objectives of CLAIU-EU serve to promote the interests of engineers who have followed a more theoretically oriented education and who are concerned with fundamental concepts and their practical application.

As representative of ARACIS (Romanian Agency for Quality Assurance in Higher Education) the author of this information participated to three of the last four CLAIU-EU Conferences, including the Bologna one:

- 2010 Brussels: “Engineering Master Degrees in Europe
- 2011 Roma: “The Formation of the Engineer- International Models”
- 2013 Bologna: “The Bologna Process and the Engineering Education”

The Bologna Conference, organized by the Consiglio Nazionale degli Ingegneri and hosted by the University of Bologna, was attended by 38 participants, coming from 12 European countries and from China and South Korea. The distribution per countries was as follows:

Italy	14
Belgium	4
Portugal	3
Spain	3
Germany	2
Korea	2
Sweden	2
China	1
Estonia	1
France	1
Ireland	1
Romania	1
Slovenia	1
Switzerland	1

All CLAIU-EU Conferences are following the same format:

- two half days, four sessions
- one key-note lecture delivered by a guest speaker at each session
- one or two invited contributions at each session
- contributions on the spot, by the participants

The lectures presented by the four guest speakers were:

**Cornelia Racke:** *Fourteens years after the Bologna Declaration is there a more homogeneous shape at the European higher education?*

**Mark Goossens:** *The Bologna process – has it improved Student Mobility and Employability?*

**Fabrizio Vestroni:** *Did the Bologna process stimulate more creativity?*

**Bernard Remaud:** *Perspective on the competences of today's engineering graduates.*

I took the opportunity and presented a contribution in the second day of the Conference.

I started by reminding that ECCE was an active participant to the four Thematic Projects EUCEET developed between 1998 and 2010 with the support of the European Commission. Considering that the true commencement of the Bologna Process was not in June 1999 in Bologna but in May 1998 in Sorbonne (at the Conference of Ministers from France, Germany, UK and Italy) and that in 2010 the creation of the EHEA - European Higher Education Area was completed, the twelve years of the EUCEET projects coincided in time with the first 12 years of the Bologna Process. I underlined on this occasion the EUCEET position on the implementation of the Bologna Declaration in civil engineering education by reading the following "Statement" adopted in 2003 in Ciudad Real.

*"EUCEET is supporting and encouraging the application of the idea of two-tier education system in Civil Engineering as suggested in Bologna Declaration.*

*The adoption of a system based on two main cycles, whenever takes place, must take into consideration the specificity of the civil engineering education and profession. Civil engineers perform and provide services to the community with significant implications for public safety and health. As a consequence, the first cycle in civil engineering education shall be relevant to the labor market and shall ensure graduates with a level of competences tuned to the substantial responsibilities of the profession. A duration of 4 years (or the equivalent of 240 ECTS credits) seems to fit that purpose.*

*A 4-year duration of the first cycle in civil engineering education is aimed also at facilitating transnational recognition of degrees and professional mobility of European civil engineers. In this respect, due consideration has to be given to the fact that various alliances between engineering organizations, such as Washington Accord and the Engineers Mobility Forum, have established that the required academic component of the qualification of a professional engineer should be 4 or 5 years full time study in University.*

*The existing integrated 5-year curricula in civil engineering, leading straight to a Master's degree, is also compatible with the letter and spirit of the Bologna Declaration and with the vision of a European Higher Education Area."*

There is no doubt that EUCEET bought a significant contribution for the adoption in several countries (Hungary, Czech Republic, Poland, Lithuania, Latvia, Spain, etc) of a system having the first cycle (Bachelor) in 4 years, followed by a second cycle (Master) of 1,5 or 2 years.

It is widely recognized in Europe that a 4-year duration of the first cycle is fully compatible with the requirement of the Bologna Declaration: ... *‘The degree awarded after first cycle shall be relevant to the European labour market as an appropriate level of qualifications’*. This requirement is not actually fulfilled in the case of the transformation of the former 5-year integrated programmes with the formula 3+2, where the first degree is merely a “*pivot*” or “*mobility*” degree, with little chances of employability for graduates. When such formula was adopted by Universities in Italy, Germany, Belgium, Netherland etc, it was certainly considered that, if not all, but the vast majority of the graduates of the first cycle will continue with the second cycle, thus completing a 5-year engineering education programme.

Under the heading “*The views of employers*” of the excellent lecture presented by Dr. More Goossens, Director of SEII - European Society for Engineers and Industrialists, Belgium, I had the pleasant surprise to see that he quoted me in the following sentence:

*Professor Iacint Manoliu, in Bucharest, said that:*

- *In most European countries, there is no framework for a proper consultation and participation of industry in the matter of HE.*
- *The few easily available reactions express their skepticism.*

I realized that the quotation was taken from my paper “*The impact of the Bologna process on the civil engineering education and profession in Europe*” published in the ECCE book “*Civil Engineering Profession in Europe – 2005 –*”.

Dr. Goossens ended his presentation with two questions and two answers:

- “*Has the Bologna Process contributed to significantly enhance student mobility and graduates’ employability, particularly in engineering?*” My answer is NO (I shall explain way).
- “*Do we have to consider that the Bologna Process is a failure?*”. My answer is also NO (even if it did not reached all its objectives, it has had the merit to start something).

Thanking Dr. Goossens for quoting me, I made, nevertheless, a critical remark concerning the second question.

In the first place, in a Conference entitled “The Bologna Process and the Engineering Education”, the question should have to be formulated:

*“Do we have to consider that the Bologna process is a failure for Engineering Education?”*

For such a question, I said, the answer could not be NO, but in the best case YES and NO.

I ended my speech by saying:

It is quite normal to consider that for Engineering Education in Europe the Bologna Process was *merely harmful* than *useful*.

The study to be finalized by October 2013 by our Standing Committee will certainly bring more light into this very important problem.

Prof. Iacint Manoliu  
Chairman of the SC E&T