

# **The Adventure of a Double Diploma for a Master Degree in the Bologna Process**

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## **1. Bologna Process in Portugal**

The two-cycle degree system is being implemented on a large scale, with more than half of the students being enrolled in it in most countries in Europe. However, there are still some obstacles to access between cycles. Furthermore, there is a need for greater dialogue, involving Governments, institutions and social partners, to increase the employability of graduates with bachelor qualifications, including in appropriate posts within the public service. There is a commitment to elaborate a national framework for qualifications compatible with the overarching framework for qualifications in the EHEA by 2010.

In Portugal, there is an engagement to restructure the educational system and some laws have been published like the Law 1 of 2003 about development and quality of higher education and the Law 37 of 2003 defining the basis for financing higher education institutions. In 2005 it was published the law that regulated the principles of the EAHE like ECTS, diploma supplement and, more recently, the law defining the structure of three cycles and degrees in HE. The laws about HE institutions autonomy and adaptation of career definition of academic staff are on the brink of being approved by the government and published.

The HE structure is composed by 14 public universities, 15 public polytechnics, 14 private universities, 17 private polytechnics and 105 higher education institutions. There is also a Catholic university with a special regime and 5 military HE institutions. There are about four hundred thousand students in HE with about 55% in the university system. About three hundred thousand are on public HE institutions.

## **2. Changes in FEUP**

FEUP is the Faculty of Engineering of the University of Porto. The university is the largest in the country with about twenty seven thousand students including the graduate levels. It has fourteen faculties and the engineering is the second largest. FEUP has about five thousand students, four hundred and fifty academic staff and one hundred and sixty non teaching staff. It has six departments and Civil is the second largest. It has about one thousand and three students, one hundred and twenty academic staff and fifty five non academic staff.

The recent legislation has imposed several changes in the cycle and the degree structure of engineering education. The main transformation was to reduce a four degree system (bachelor, licentiate, master and

doctor) to a three degree structure. The legislators decided to abolish the term bachelor, to call the first cycle graduate licenciante, to call the second degree graduate master and maintain the highest level of education denominated as doctor. Other transformations were the formal introduction of the learning paradigm based on the student and the creation of the credits of disciplines based on the student working load using the structure of ECTS.

FEUP decided to propose integrated degrees for degrees awarded with a sole path from beginning to the end of 300 credits. It combines first and second cycles of studies and awards the degree of master. It has an exit of the study plan at the end of the first 180 credits with a degree in engineering sciences. For the Master in Civil Engineering it has seven options of specialization in the last of the five years in structures, geotechnical, hydraulics, construction, transports, planning and materials. There are thirty credits in the last year that are dedicated to research or applied design. In both cases the work has to involve production of knowledge and other competences like autonomy and critical analysis and synthesis. The legislation also allows joint diplomas with foreign schools with certain flexibility in terms of scope and depth.

### **3. Expectations for the Agreement FEUP-ENPC**

The cooperation between ENPC and FEUP in the area of studies has been occurring for a long time and has started with the Erasmus mobility program. It has continued and developed with the participation in the thematic network in Civil Engineering EUCEET and in exchanges of academic staff, research and development of internships. This allowed a certain knowledge about the structures, methods, strategies and, especially, of the persons working in the other school. This is an experience of several years that allowed the awareness of other school activities.

The three recommendations for a successful joint degree of EUA are quality assurance and recognition, student experience and mobility and curriculum integration and sustainability. According to our experience in another European joint master in construction these are fundamental conditions for a successful cooperation. In fact a signature of a cooperation agreement has to be done with a period of mutual analysis and cooperation allowing further steps to a more responsible link between partners. It is similar to a marriage where dating is indispensable to avoid disruptions. Some cooperation agreements are based on contractual clauses to ensure fulfillment of obligations but that is impossible in education, especially in HE.

In fact, ENPC and FEUP recognized quality in the partner during the years with consequent recognition, there was a long history of student exchange between the two schools and the sustainability of the studies had been tested and approved throughout the years. These conditions led to the signature of the protocol as a natural development addressing the strategy of both schools and the assurance that the future will be encompassing better options for the students and for the academic staff. The protocol has three pages and that illustrates the confidence and recognition that both parties expressed while deciding the approval of this protocol.

The agreement is valid for five years and it is expected to start in the academic year of 2007/8. It has raised a strong interest in the potential attendees in FEUP due not only to the prestige of ENPC but mostly for the possibility of having two degrees simultaneously in a world that is becoming more global. It is expected that there will be other effects of innovation and improvement within FEUP like the academic staff being available to discuss curriculum, degree structure, evaluation methods, professional internships and other developments based on this experience of close cooperation. It is also expected that, when results of this cooperation can be evaluated, to extend the experience with other schools around Europe and in other continents.

### **References**

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