



New Titles Implementation in the Framework of European Higher Education Area at E.T.S. Ingenieros Agrónomos of Madrid: Education Planning

Augusto Arce (1), Ana Maria Tarquis (2), Javier Caniego (2), Jesus Vazquez (3), Augusto Serrano (4), and Maria Carmen Cartagena (1)

(1) Dpto de Química y Análisis Agrícola, Universidad Politecnica de Madrid, Madrid, Spain (augusto.arce@upm.es), (2) Dpto de Matemática Aplicada a la Ingeniería Agronómica, UPM, Madrid, Spain , (3) Dpto de Ingeniería Rural, UPM, Madrid, Spain , (4) Dpto de Economía y Ciencias Sociales Agrarias, UPM, Madrid, Spain

The Bologna Process is to improve the quality of education, mobility, diversity and the competitiveness and involves three fundamental changes: transform of the structure of titles, changing in methods of teaching and implementation of the systems of quality assurance. Once that titles structure given by the E.T.S. Ingenieros Agrónomos (ETSIA) have been defined, this work has focused in the second point, change of teaching methods as well as the new three titles planning that begins to impart at ETSIA, Madrid, during 2010-2011 course.

Following Bologna planning, three new graduate titles have been designed: Engineering and Agronomic Science Graduate, Engineering Food Science Graduate and Environmental Engineering Graduate. Each one of them with 240 European credits (ECTS) and a common required first course for the three titles. Within the educational innovation project given by UPM, titled "Implementation of the new degrees at ETSIA within the European Higher Education Area: orientation, host and planning lessons", educational planning has been developed with the priority to define a educative model that identify all the teaching activities aimed to the students involved in the new titles.

The model shows partially a proper teaching style at ETSIA-UPM and, on the other hand, a significant conceptual change in teaching-learning methods. Based on an agreement among academic Departments imply in the first course teaching, a common set of rules that define teaching-learning process are applied. This process is based on student motivation and active participation that allows an implementation of continuous evaluation. At the same time, there is a full coordination among the teachers from each subject in the teaching planning, given a fundamental role to TIC applications and, in particular, to the institutional platform MOODLE. Finally, two documents were designed prior the beginning of the course for each subject in both semesters: Technical Files and Tutorials. In this way, the students could consult through several media offered by the ETSIA.