I. GENERAL PROVISIONS

MINISTRY OF SCIENCE AND INNOVATION

2804 *Order CIN/ 324/2009, of February 9, which establishes the requirements for the verification of official university degrees that qualify for the exercise of the profession of Technical Forest Engineer.*

The ninth additional provision of Royal Decree 1393/2007, of October 29, which establishes the organization of official university education, establishes that the Ministry of Science and Innovation will specify the contents of its Annex I to which they must comply the applications submitted by universities to obtain verification of the study plans leading to the obtaining of official Bachelor's or Master's degrees, provided for in article 24, which enable the exercise of regulated professions.

Current legislation establishes the profession of Forest Technical Engineer as a regulated profession whose exercise requires being in possession of the corresponding official Degree title obtained, in this case, in accordance with the provisions of article 12.9 of the aforementioned Royal Decree 1393/2007, in accordance with the conditions established in the Agreement of the Council of Ministers of December 26, 2008, published in the "Official State Gazette" of January 29, 2009.

In said Agreement, while the appropriate reforms to the regulation of professions in general in Spain are established, the conditions to which the study plans must be adapted are determined. In its fourth section, in relation to the ninth additional provision mentioned above, it entrusts the Minister of Science and Innovation with establishing the requirements regarding objectives and title of the title and planning of the teachings.

Therefore, in view of the aforementioned provisions, it is appropriate to establish the requirements to which the study plans leading to obtaining the Degree titles that qualify for the exercise of the profession of Technical Forest Engineer must be adapted, which present the universities for verification by the Council of Universities.

In the preparation of this order, the interested colleges and professional associations have been heard. It has also been informed by the Government Delegate Commission for Economic Affairs at its meeting on January 29, 2009.

In its virtue, following a report from the Council of Universities, I have:

Unique item. *Requirements of the study plans leading to obtaining the Degree titles that qualify for the exercise of the profession of Technical Forest Engineer.*

The study plans leading to obtaining the Degree titles that enable the exercise of the profession of Technical Forest Engineer, must comply, in addition to the provisions of Royal Decree 1393/2007, of October 29, by which establishes the organization of official university education, the requirements regarding the sections of Annex I of the aforementioned Royal Decree that are indicated in the Annex to this Order.

First final provision. *Application and development enablement.*

The General Directorate of Universities is authorized to issue the necessary resolutions for the development and application of this Order.

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Second final provision. *Entry into force.*

This Order will come into force on the day following its publication in the "Official State Gazette."

Madrid, February 9, 2009. -The Minister of Science and Innovation, Cristina Garmendia Mendizábal.

EXHIBIT

Establishment of requirements regarding certain sections of Annex I of the Royal Decree 1393/2007, of October 29, which establishes the organization of official university education, relating to the report for the request for verification of official degrees

Section 1.1 *Name. -The* name of the degrees must comply with the provisions of the second section of the Agreement of the Council of Ministers of December 26, 2008, which establishes the conditions to which the study plans leading to the obtaining titles that enable the exercise of the regulated profession of Technical Forest Engineer, published in the "Official State Gazette" of January 29, 2009 by Resolution of the Secretary of State for Universities of January 15, 2009, already provided in this Order. So:

1. The name of the official university degrees referred to in the previous section must facilitate the identification of the profession for which it is qualified and, in no case, may it lead to error or confusion regarding its professional effects.

2. No study plan corresponding to an official university degree whose name includes an express reference to the profession of Forestry Technical Engineer may be subject to verification by the Council of Universities, without said degree meeting the conditions established in the aforementioned Agreement. and in this Order.

Section 3. Objectives. -Competencies that students must acquire:

Ability to understand the biological, chemical, physical, mathematical foundations and representation systems necessary for the development of professional activity, as well as to identify the different biotic and physical elements of the forest environment and the renewable natural resources susceptible to protection and conservation. and uses in the forestry field.

Ability to analyze the ecological structure and function of forest systems and resources, including landscapes.

Knowledge of the degradation processes that affect forest systems and resources (pollution, pests and diseases, fires, etc.) and ability to use techniques to protect the forest environment, forest hydrological restoration and biodiversity conservation. .

Ability to evaluate and correct environmental impact, as well as apply environmental auditing and management techniques.

Knowledge of the bases of forest improvement and capacity for its practical application to plant production and biotechnology.

Ability to measure, inventory and evaluate forest resources, apply and develop silviculture and management techniques for all types of forest systems, parks and recreational areas, as well as techniques for the use of timber and non-timber forest products.

Ability to solve technical problems derived from the management of natural spaces.

Ability to manage and protect forest fauna populations, with special emphasis on hunting and fish farming.

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Knowledge of hydraulics, construction, electrification, forest roads, machinery and mechanization necessary for both the management of forest systems and their conservation.

Ability to apply forest management and territorial planning techniques, as well as the criteria and indicators of sustainable forest management within the framework of forest certification procedures.

Ability to characterize the anatomical and technological properties of timber and non-timber forest raw materials, as well as the technologies and industries of these raw materials.

Ability to organize and plan companies and other institutions, with knowledge of the legislative provisions that affect them and the fundamentals of marketing and commercialization of forest products.

Ability to design, direct, prepare, implement and interpret projects and plans, as well as to write technical reports, recognition reports, evaluations, expert opinions and appraisals.

Ability to understand, interpret and adopt scientific advances in the forestry field, to develop and transfer technology and to work in a multilingual and multidisciplinary environment.

Section 5. *Teaching planning.*

The titles referred to in this agreement are official university degree courses, and their study plans will have a duration of 240 European credits referred to in article 5 of the aforementioned Royal Decree 1393/2007, of October 29.

They must take the basic training block of 60 credits, the common block for the forestry branch of 60 credits, a complete block of 48 credits, corresponding to each area of specific technology, and complete a final degree project of 12 credits.

The study plan must include at least the following modules:

Module	No. of credits Europeans	Skills to be acquired
Deformation basic.	60	Ability to solve mathematical problems that may arise in engineering. Ability to apply knowledge of: linear algebra; geometry; differential geometry; differential and integral calculus; differential and partial differential equations; numerical methods, numerical algorithms; statistics and optimization. Capacity for spatial vision and knowledge of graphic representation techniques, both through traditional methods of metric geometry and descriptive geometry, and through computer-aided design applications. Basic knowledge of the use and programming of computers, operating systems, databases and computer programs with applications in engineering. Basic knowledge of general chemistry, organic chemistry and inorganic and its applications in engineering. Understanding and mastery of the basic concepts of the general laws of mechanics, thermodynamics, fields, waves and electromagnetism and their application to solve engineering problems. Basic knowledge of geology and terrain morphology and its application in engineering-related problems. Climatology. Adequate knowledge of the concept of a company, institutional and legal framework of the company. Business organization and management. Knowledge of the bases and biological foundations of the field plant and animal in engineering.

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Module	No. of credits Europeans	Skills to be acquired
Common to the Forestry branch.	60	Ability to know, understand and use the principles of: Forest Botany. Forest Zoology and Entomology. Sciences of the Physical Environment: Geology, Climatology and Soil Science. Forest Ecology. Evaluation and correction of environmental impact. Topography, Geographic Information Systems and Remote Sensing. Forestry Hydraulics. Forestry electrotechnics and electrification. Forestry machinery and mechanization. Forest constructions. Forest roads. Forestry. Dasometry and forest inventory. Forestry Uses. Forest Certification. Forest Legislation. Sociology and Forest Policy. Methodology, organization and project management.
Specific technology. Forestry exploitations. Forest industries.	48	Ability to know, understand and use the principles of: Pasture farming and Agroforestry Systems. Forest Repopulations. Forest Planning. Forest Improvement. Gardening and Nurseries. Forest Diseases and Pests. Hunting and Fishing Management. Aquaculture Systems. Territorial Organization and Planning. Forest Landscaping. Hydrology and Hydrological-Forest Restoration. Recovery of Degraded Spaces. Prevention and fight against Forest Fires. Internal anatomical structure and macroscopic properties of the wood. Supply of raw materials in the forestry industry. Knowledge of the basic principles of the first and second wood transformation processes. Knowledge for the calculation and design of carpentry, drying, debarking and shredding installations of wood. Knowledge of the basic principles of cellulosic and paper chemistry and its industrial processes. Non-wood forest raw materials. Industrial processes of non-wood products: cork, resin, essential oils. Industrial xyloenergetic processes. Quality control in the forestry industry. Safety and industrial hygiene. Environmental management of the forestry industry.
Final degree project.	12	Original exercise to be carried out individually and presented and defended before a university tribunal, consisting of a project in the field of specific technologies of Forest Engineering of a professional nature in which the skills acquired in the teachings are synthesized and integrated.

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