



## FORESTRY INTERNATIONAL SEMESTER PROGRAM (Bachelor level) from February to July

The **University of Valladolid** (E VALLADO01, UVa) provides foreign students with the exciting opportunity to add an international perspective to their education at a Spanish University with a reputation for excellence in forestry teaching and research.

The **Forestry International Semester Program (CODE 903)** is offered to ERASMUS students who come to University of Valladolid in the framework of the interinstitutional agreements signed with partner universities (<http://www.relint.uva.es/>). It is taught at Higher Technical School of Agricultural Engineering located at the campus of Palencia (<http://www5.uva.es/etsiiaa/>)

The **Forestry International Semester** is a fantastic opportunity for students with an interest in Mediterranean Forestry and Natural Resources Management. It is mainly addressed to **Bachelor Forestry** students with **basic Spanish knowledge**, interested in widening their studies of the **Mediterranean Forests** improving their Spanish. Bachelor students in **Environmental and Earth Sciences, Agronomy or Biology** will also be welcome to follow the semester.

This **International Semester Program on Forestry** consists of **eight subjects, 3ECTS** each, entirely taught in English, a **3 ECTS Forest Practicum** (field practicum) delivered **in English and a part in Spanish adapted to non-native speakers**, and an **Internship (6 ECTS)** which will be carried out in the labs of University Departments. The subjects offered are:

- ❖ **“Geobotany” (3ECTS) CODE 75025.**
- ❖ **“Forestry and Biodiversity” (3 ECTS) CODE 75026.**
- ❖ **“Forestry and Climate Change” (3 ECTS) CODE 75027.**
- ❖ **“Forest Practicum” (3 ECTS) CODE 75028.**
- ❖ **“Conservation Hydrology” (3 ECTS) CODE 75029.**
- ❖ **“Forest Soils and Carbon Sequestration” (3 ECTS) CODE 75030.**
- ❖ **“Molecular Markers& Diagnostic of Plant Diseases” (3 ECTS) CODE 75031.**
- ❖ **“Conservation and Improvement of Forest Genetic Resources” (3 ECTS) CODE 75033.**
- ❖ **“Integrated Management of Forest Pest and Diseases: Cases Studies” (3 ECTS) CODE 75034.**
  
- ❖ **“Internship” (6 ECTS) CODE 75035.**

Internship is open only to students who have completed at least five semesters in their home Degrees.

Students can follow the International Semester Program with or without Internship. The Forestry International Semester Program without Internship has 27 ECTS (It is mandatory to take the 9 subjects of 3 ECTS offered). The Forestry International Semester Program with Internship has 30 ECTS; the student has to choose 8 subjects of the 9 offered in addition to the Internship.

Also a **SPANISH COURSE (3 ECTS)** taught by the language Center of the University (<https://spanishinvalladolid.com/>) can be followed by the forestry international semester students, but it is out of the International Semester Program.

We would be grateful if you could disseminate this information among prospective interested students. Should you have any enquiry concerning this subject or bilateral agreements, do not hesitate to contact María-Belén Turrión ([bturrión@agro.uva.es](mailto:bturrión@agro.uva.es)), Coordinator of International Relationships of the Higher Technical School of Agricultural Engineering at Palencia.



**Geobotany (CODE 75025).** *This course explores the biogeography and ecology of the world's main forest biomes. It introduces the earth's biological history and development of regional floras. The distribution patterns of forest biomes, from the poles to the tropics, their ecological adaptations to climate and soil, vegetation dynamics and response to disturbance will be covered. Land use and global environmental change will be also taken into account.*

**Forestry and Biodiversity (CODE 75026).** *The subject focuses on multifunctional silviculture understood under a biodiversity point of view. That is, silviculture focused on biodiversity conservation in forestry. The students will participate actively in the diagnosis of special study cases and present the basis of a silviculture management program for a special case.*

**Forestry and Climate Change (CODE 75027).** *It is a course on silvicultural methods applied under environmental change. Mitigation and adaptation to climate change effects are key in the forest management systems. Students will insight on the basic aspects of the effects of climate change on forest systems and on the possibilities of mitigating its effects. The students' abilities will be strengthened to obtain, elaborate, criticize and communicate scientific ideas to specialized and non-specialized audiences.*

**Forest Practicum (CODE 75028).** *The course is a real integration of practical knowledge from several subjects applied to a real case study. During Practicum, a forest is assessed in terms of botany, ecology, edaphology, silviculture, wildfire prevention, soil conservation and wildlife. The course takes place in the forests of the Cantabrian Range, North of Spain. (3 ECTS, field practicum).*

**Conservation Hydrology (CODE 75029)** *Hydrology applied to the conservation of water and soils in slopes and watersheds, and in rivers. This course has a marked practical approach, but without neglecting the theoretical bases essential for the correct interpretation of the hydraulic and hydrological processes under study. Software tools such as: HEC-HMS (surface hydrology; hydrographs); MODIPÉ (rainwater conservation and harvesting in afforestation schemes); RUSLE (soil erosion by water); WEPS (wind erosion) and PHABSIM (environmental river flows) will be used.*

**Forest Soils and Carbon Sequestration (CODE 75030).** *In the context of the actual global climate change, soils play a vital role in the carbon cycle. Understanding factors that control soil carbon sequestration, and evaluating management techniques for mitigation and adaptation to the climate change, related to soil fixation, are useful tools for forestry and environmental engineers. Quantification and evaluation of soil organic carbon stocks will be carried out through laboratory and field practices.*

**Molecular Markers & Diagnostic of Plant Diseases (CODE 75031).** *Molecular markers and techniques have become an essential tool in identifying agents causing diseases in all kind of organisms, including forests plants. This course will focus on the nowadays and up-to-date available molecular techniques that can be used in all aspects related to plant health: certification, control and diagnosis of pests and diseases, traceability of products, environmental monitoring,...*

**Conservation and Improvement of Forest Genetic Resources (CODE 75033).** *Genetic variability is the basis for the conservation and evolution of populations and species, since adaptation to new environmental conditions depends on it. Genetic resources are the raw material for breeding programs. Identifying genetic risks in vulnerable species and populations, deciding which conservation strategy is the most appropriate and prioritizing the most efficient actions to improve the conservation status in each case is crucial to develop efficient conservation programs.*

**Integrated Management of Forest Pest and Diseases: Cases Studies (CODE 75034).** *The forest masses represent one of the most valuable ecosystems for our societies; however, they are subject to numerous biotic and abiotic threats. Forest health requires the integrated application of tools and methods that minimize harm caused by these with the least possible alteration of forest ecosystems, promoting the natural mechanisms of pest control.*

**Internship (CODE 75035).** *The research internship experience provides the student with an opportunity to explore career interests while applying knowledge and skills learned in the classroom in a research setting. Internships will be completed under the guidance of supervisor. The internships will be done in the University Department where the supervisor (academic tutor) belongs to.*