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## ***Teach Mob – Visiting Professors*** ***Academic year 2015/2016***

1st term
<b>COURSE TITLE</b> Carbon and element cycling in forest soils
<b>Scientific area</b> Soil Science
<b>Department of Agricultural, Forest and Food Sciences and Technologies</b>
<b>Language used to teach</b> ENGLISH
<b>Course summary</b> The course will furnish a deep knowledge on soil organic matter and nutrient dynamics in order to understand the factors which drive plant nutrition and pedogenesis processes in forest ecosystems, while considering also the new scenario due to climate change. In detail the programme will be developed as follows: Functionality of the forest ecosystem and biogeochemical cycles Forest floor and humus classification Carbon cycle and soil organic matter dynamics Processes that control soil organic matter decomposition Effects of organic matter on chemical, physical and biological soil properties Nitrogen cycle Phosphorus cycle Sulphur cycle Micronutrient cycle Influence of forest management on C and nutrient dynamics.
<b>Learning objectives</b> With this course the student will acquire a large competence on soil organic matter and nutrient dynamics in forest ecosystems, humus types, and interconnections between soil nutritional properties and forest management..
<b>Lab activities</b> The course will provide field excursions to show ecosystems in temperate areas where there is evident effect of land use change on pedogenic processes and nutrient cycling

<b>Visiting Professor Profile</b> The visiting professor should have a large experience on teaching soil and environmental sciences especially related to biogeochemical cycling of elements in forest soils, while evaluating the factors which affect forest functionality and environmental aspects. The knowledge of soil biology and the interconnection between microorganism-plant and soil compartments is largely appreciated. Studies in different environments is also required for showing soil-plant dynamics in different ecosystems to students.
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