Visiting Professors
Academic year 2018/2019

1st term

**COURSE TITLE**
Forest Landscape Ecology

**Scientific area**
Forest management and silviculture

**Department of Agricultural, Forest and Food Sciences**

**Language used to teach**
English

**Teaching Commitment:** 60

**Course summary**
Forest Landscape ecology (2 CFU) stresses the interaction and reciprocal influence of patterns (landscape structure) on ecological processes (e.g. disturbances, animal and plant dynamics), and their impact on forest and landscape management. The course will consist of lectures, with lab exercises during the course term that emphasize deeper understanding of the principles in lectures. Forest Landscape Ecology Lab (4 CFU) will explore forest landscape ecology as a framework for forest landscape research, analysis and management. This course will: 1) synthesize the dominant themes of landscape ecology; 2) familiarize students with current research trends in the field; and 3) explore applications of the landscape approach to forest research and management. The course is useful to graduate students and senior undergraduates in forestry and natural resources, ecology, conservation biology, landscape architecture, geography, land use planning, and other fields. The course will consist of lectures, with lab exercises during the course term that emphasize deeper understanding of the principles in lectures.

**Learning objectives**
Understand the influence of forest landscape pattern on local process.
Learn the utility of landscape ecology tools, including using and calculating landscape metrics.
Understand the importance of long time frames as important to forest landscape change.
Formulate individual research questions for a forest landscape scale project.
Understand the importance of mixed landscapes, eg, with agriculture, forests, wetlands, and how they can influence each other.
Formulate relevant questions to landscape management in a chosen field of work, such as forestry, agriculture, land use planning, etc.

**Tutorship activities**
Tutorship activities towards master students and PhD students regarding the spatial statistics

**Lab activities**
Lab activities will emphasize deeper understanding of lecture principles. Lab activities will include collecting data in the field, and simple methods of integrate these data with remotely sensed one (e.g. aerial and satellite imagery, LiDAR). Labs will include how to manage and analyse spatial data,
calculating and using landscape metrics, comparing human effects on forest landscapes, and simple spreadsheet models.

**Other activities besides the course: i.e. seminars and conferences addressed to PhD students and research fellows, dissemination conferences**
The course will be open to PhD students and during his/her stay the visiting professor will give a seminar for the whole Department related both to his/her research and teaching activity.
The visiting Professor, as additional activity, will be asked to teach seminars (10 hours) in applied statistics (spatial patterns and models) for PhD students (20 people)

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<th>Visiting Professor Profile</th>
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<td>The candidate must have experience in Landscape ecology teaching in post-graduated courses, experience in landscape ecology research applied to silviculture, forest ecology and natural resource management, leadership in national and International projects, already established contacts with Italian research groups, publications in ISI-Scopus journals with high impact factors. The candidate should demonstrate leadership in national and international professional societies, including editorship and board membership of societies and the major journals in the field. Demonstrated productivity in PhD and post doc mentorship, with former students in major faculty and research positions.</td>
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<th>Contact person at the Department</th>
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<tr>
<td>Prof. Matteo Garbarino</td>
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