



UNIVERSITÀ DEGLI STUDI DELLA BASILICATA
SAFE - SCUOLA DI SCIENZE AGRARIE, FORESTALI, ALIMENTARI ED AMBIENTALI

ACADEMIC YEAR: 2016-2017

COURSE: Regional silviculture and ecosystem processes

TYPE OF EDUCATIONAL ACTIVITY: Basic

TEACHER: Marco Borghetti

e-mail: marco.borghetti@unibas.it

Web:

<https://sites.google.com/site/marcoborghetti1958/marcoborghetti>

<https://scholar.google.it/citations?user=Gx9jsp8AAAAJ&hl=it&oi=ao>

Phone: 0971 205246

mobile: 329 3606256

Language: Italian

ECTS: (lessons / tutorials/practice): 12	n. of hours: 64 hours of lessons 64 hours of practice	Campus: Potenza School: SAFE Program: LM Forest and Environmental Sciences	Semester: I & II
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EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

We provide knowledge on the characteristics, functionality and direction of change (with respect to expected climate and land-use changes) of the main Italian forests with special focus on the Mediterranean forests. The aim is to allow the student to acquire the necessary know-how to define suitable cultural tools and plans towards the adaptive management of forest ecosystems.

PREREQUIREMENTS

- LT (3-year degree): Forest and Environmental Science
 - Forest ecology and general silviculture
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SYLLABUS

Lessons

Consistency, general characteristics, functionality, silvicultural and management methods for the following Italian forests: Mediterranean macchia, evergreen oak forests, Mediterranean pine forests, deciduous oak forests, chestnut stands, beech and silver fir forests, Norway spruce, larch, Scots pine and stone pine forests.

General principles on nursery practice and tree crop plantations.

Environmental physiology of forest trees and forest stands with special focus on carbon uptake and water relation processes and the functional response of forest ecosystems to climate change. Process-based models to predict the carbon uptake of forest ecosystems: general principles and main characteristics.

Practices

Case studies on the management of important Italian forests, from the Mediterranean to the sub-alpine belt.

Use of process-based model to predict the carbon uptake of forest ecosystems.

TEACHING METHODS

64 hours of lessons 64 hours of laboratory and field practices. During practices students will be asked to analyze specific forest management case studies.

EVALUATION METHODS

Oral examination at the end of the course. Three questions, one of which related to topics addressed during practices.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL



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- Teaching material distributed in classroom
 - Del Favero R. (2008) I Boschi delle regioni meridionali e insulari dell'Italia. CLEUP, Padova.
 - Waring, R.H., and S.W. Running (1998). Forest Ecosystems: Analysis at Multiple Scales. Academic Press, San Diego
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INTERACTIONS WITH STUDENTS

- in the office at planned days/hours (usually on Wednesday)
 - email, skype (every time)
 - mobile (every time)
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EXAMINATION SESSIONS (Forecast)

Calendar online:

<https://unibas.esse3.cineca.it/Home.do>

Usually the third Wednesday of every month (except August)

EVALUATION BOARD

Marco Borghetti
Agostino Ferarara
Francesco Ripullone

SEMINARS BY EXTERNAL EXPERTS YES
