

DEPARTMENT	Scienze Agrarie e Forestali
ACADEMIC YEAR	2014-2015
DEGREE COURSE	MSc SCIENZE FORESTALI ED AMBIENTALI
COURSE	Agronomy in mountain areas
ARRANGEMENT INTO MODULES	No
NUMBER OF MODULES	
SCIENTIFIC GROUP	AGR/02
TEACHER	Mauro Sarno
NUMBER OF CREDITS	6
NUMBER OF HOURS NECESSARY TO ACHIEVE FULL LEARNING	60
NUMBER OF TEACHING HOURS	60
EXAMS TO PASS BEFORE	None
YEAR OF THE COURSE	1
LOCATION OF THE COURSE	Indicated in the Class schedule
COURSE ARRANGEMENT	Lectures, Practical exercises
ATTENDANCE	Recommended
EVALUATION METHOD	Final oral examination
RATING OF EXAMINATION	Mark ranging between 18 and 30
SEMESTER	First
CALENDAR OF EDUCATIONAL ACTIVITIES	According to the calendar published before beginning the course
STUDENTS RECEIVING	On Tuesday at 10-11 a.m. (to confirm according to the lesson timetable)

<p>EXPECTED LEARNING OUTCOME</p> <p>Knowledge and understanding skills Broad knowledge of Agronomy for the agricultural management of mountain areas. Specific knowledge to improve agriculture production, landscape and environmental protection in mountain areas. Ability to use language specific to agronomy.</p> <p>Ability to apply knowledge and comprehension Ability to analyze, understand and organize the data coming from the environment (soil, plants and atmosphere) to ensure the best planning and the best land use.</p> <p>Ability to judge To be able to assess and interpret the implications and results of agronomic studies of highland areas in order to define the main characteristics of the environments to manage. Competent in managing correctly the agronomic techniques for sustainable and /or organic agriculture in mountain areas.</p> <p>Ability to communicate To be able to highlight the importance of the environmental impacts of agronomic techniques in mountain areas, also to non-experts, using language specific to agronomy.</p> <p>Ability to learn Ability to keep up to date through reading related scientific papers. Able to attend seminars and specific meetings and understand the contents of textbooks while applying the knowledge in the field.</p>
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<p>OBJECTIVES</p> <p>The aim of the course is to provide to the students with the methods for appropriate analysis and correct practice of agriculture in mountainous areas, as well as agronomic knowledge elements essential for the conservation and protection of the environment.</p>

Scheduled hours	TOPICS
2	Introduction: definition and aims of the subject.

6	Elements of Agronomy
4	Agronomic aspects of the various territorial structures (mountain, hill and flat).
2	Ranges of crop: crop density, crop vocation. Environmental, and socioeconomic aspects of production.
3	The main cropping systems in the local context: intensive, extensive, organic and sustainable agriculture
4	Dryland farming techniques
4	Influence of tree crops and field crops on soil characteristics
3	Soil erosion management
1	Windbreaks
4	Agro-forestry and nutrients elements recycling
4	Agro-forestry for soil management
4	The interlayers crops
4	The pastures and the meadows
4	Multi-layer systems
4	Definition and evaluation of the agro-forestry environmental role.
4	Agronomic techniques to protect the environment of the area
Practical applications 3	Project work on one issue chosen by the student.
Suggested books	<p>John m. Laflen, Junliang Tian, Chi-Hua Huang. Soil Erosion and Dryland Farming. CRC Press, 2000.</p> <p>Lynne Chatterton & Brian Chatterton. Sustainable Dryland Farming. Cambridge University Press, 1996.</p> <p>Anthony Young. Agroforestry for soil management. CAB International & ICRAF. 2nd edition.</p> <p>P.J. Bohlen, G. House. Sustainable Agroecosystem Management.</p> <p>Giardini L. Agronomia generale, aziendale ed ambientale. Ed. Patròn, Bologna, ultima edizione.</p> <p>Bonciarelli F. Fondamenti di Agronomia generale. Edagricole, Bologna, ultima edizione.</p> <p>Leone A. Ambiente e territorio agroforestale. Linee guida per la pianificazione sostenibile e gli studi di impatto ambientale. Edizioni Franco Angeli.</p> <p>Materiale bibliografico distribuito dal docente</p> <p>Appunti delle lezioni</p>