



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Agrarie, Alimentari e Forestali		
ACADEMIC YEAR	2018/2019		
BACHELOR'S DEGREE (BSC)	FORESTRY AND ENVIRONMENTAL SCIENCES		
SUBJECT	ELEMENTS OF AGRONOMY		
TYPE OF EDUCATIONAL ACTIVITY	C		
AMBIT	10689-Attività formative affini o integrative		
CODE	13488		
SCIENTIFIC SECTOR(S)	AGR/02		
HEAD PROFESSOR(S)	SARNO MAURO	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	8		
INDIVIDUAL STUDY (Hrs)	132		
COURSE ACTIVITY (Hrs)	68		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	1° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	SARNO MAURO Tuesday 10:00 11:00 Dipartimento di Scienze Agrarie, Alimentari e Forestali (S.A.A.F.) - V.le delle Scienze, Edificio 4 - Ingresso L - Piano 2° - Stanza 8 Thursday 10:00 11:00 Dipartimento di Scienze Agrarie, Alimentari e Forestali (S.A.A.F.) - V.le delle Scienze, Edificio 4 - Ingresso L - Piano 2° - Stanza 8		

DOCENTE: Prof. MAURO SARNO

PREREQUISITES	Pedology and/or soil chemistry. Plant biology
LEARNING OUTCOMES	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. Ability to analyze, understand and organize the data coming from the environment (soil, plants and atmosphere) to ensue the best planning and the best land use. 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. To be able to highlight the importance of the environmental impacts of agronomic techniques, also to non-experts, using language specific to agronomy. 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.
ASSESSMENT METHODS	The candidate will have to answer at least to two / three oral questions, on the whole program, with reference to the recommended texts. The final assessment aims at evaluating whether the student has knowledge and understanding of the topics, if he has acquired the right skills to interpret and analyze some concrete cases. The pass mark will be reached when the student shows knowledge and understanding of the subjects at least in general terms, and he has minimal knowledge skills in order to solve concrete cases; he must also show to have presentation skills to expose his knowledge to the examiner. Below this threshold, the examination will be insufficient. The more, however, the examinee with his argumentative and presentation skills can interact with the examiner and he can go into more details on the subject, the more the assessment will be positive. The assessment will be evaluated out of thirty. Minimal knowledge skills The candidate must be able to list, interpret and use the environmental factors needed for a proper agronomic intervention plan (ex. for a fertilization plan).
EDUCATIONAL OBJECTIVES	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.
TEACHING METHODS	48 hours of lectures, 10 hours for exercises and 10 hours for laboratory
SUGGESTED BIBLIOGRAPHY	"L' agronomia per conservare il futuro" di Luigi Giardini - Patron Editore "Agronomia" a cura di Paolo Ceccon et al. - Edises S.r.l.

SYLLABUS

Hrs	Frontal teaching
2	Definition and tasks of agronomy
2	Ecosystem of agriculture
2	Factors for plant production
9	Climate and cultivated plants
8	The arable soil
5	Irrigation
7	Dryfarming principles
2	Regulation of rainwater
3	Soil organic matter
2	Plant fertilization
2	The weeds
2	Intercropping system
2	Methods of propagating the plants
Hrs	Practice
2	Climate and cultivated plants. Students will apply in classroom the different estimation systems for climate classification.
2	The arable soil. Will show to the students different types of soil and their main physical characteristics.
2	Dryfarming principles. Students will practice on estimating evapotranspiration, the soil water budget to reach the estimation of water use efficiencies (W.U.E.)
2	Soil organic matter. Students will apply the principles and methods of calculation for the balance of organic matter in soil
2	Plant fertilization. Students will apply the principles and methods to calculate for the balance of plant nutrition elements.

Hrs	Others
10	Technical visit. The students will visit one or more farms.