



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Agrarie, Alimentari e Forestali		
ACADEMIC YEAR	2018/2019		
BACHELOR'S DEGREE (BSC)	VITICULTURE AND OENOLOGY		
SUBJECT	WINE GROWING		
TYPE OF EDUCATIONAL ACTIVITY	B		
AMBIT	50125-Discipline della produzione vegetale		
CODE	01102		
SCIENTIFIC SECTOR(S)	AGR/03		
HEAD PROFESSOR(S)	BARBAGALLO MARIA GABRIELLA	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	9		
INDIVIDUAL STUDY (Hrs)	135		
COURSE ACTIVITY (Hrs)	90		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	BARBAGALLO MARIA GABRIELLA Thursday 12:00 15:00 Sede del Corso di Studi in Viticoltura ed EnologiaPalazzo Principe di Napoli - Via Cappuccini 7, 91100 – Trapani		

DOCENTE: Prof.ssa MARIA GABRIELLA BARBAGALLO

PREREQUISITES	Knowledge requirements consist of basic courses of mathematics, physics, inorganic and organic chemistry, botany (morphology and physiology), biochemistry, agronomy, plant genetics and arboriculture.
LEARNING OUTCOMES	Knowledge and understanding. Acquiring the fundamentals of ecology, physiology of grapevine, and viticultural systems. Knowledge of propagation in viticulture, fundamental knowledge on rootstock/scion interactions and on vineyard practices, source-sink relationships, trellis and pruning systems. Applying knowledge and understanding. Ability to recognize, and to autonomously organize, the information required to formulate cultural technical choices at the basis of the establishment a vineyard in relation to qualitative and quantitative purpose and environmental characteristic of site cultivation. Making judgements. Ability to choose vineyard establishment and capacity to evaluate results achieved in relation to specific qualitative and quantitative purpose and to climate characteristic of cultivation site. Communication Ability. Ability to explain, motivate the technical choices taken to establish the vineyard for specific wine productions. Being able to support their importance and to stress the outcomes both on the production and on the environmental side. Learning skills. Ability to recover different informations independently in viticulture, ability to motivate and to analyze the technical choices taken to establish the vineyard for specific wine productions. Ability to search and usage of information and knowledge support systems
ASSESSMENT METHODS	Oral exam consists of a colloquium aiming to ascertain the level of competences and knowledge acquired within the course. Grading will be done in a scale from 1/30 to 30/30; threshold grading for passing is 18/30. Exam questions will aim to assess: a) knowledge acquired, b) ability to elaborate on course subjects, c) ability to adequately express with a good degree of synthesis and effectiveness. In detail, oral assessment will be performed as follows: a) knowledge and comprehension acquired within the course will be assessed through specific questions on grapevine morphology and organography, phenology, vegetative and reproductive growth, vineyard establishment, plant material and nursery steps to produce different type of plant materials, rootstocks and varieties characteristics, trellis system and pruning types, pruning and canopy management, irrigation, fertilisation, soil management. b) the ability to elaborate o course subjects will be assessed within at least one of the following scopes: b1) ability to express autonomous reasoning about phisiology, phenology, growth dynamics, establishment of vineyards in relation to qualitative and quantitative purpose and environmental characteristic of site cultivation b2) overall comprehension of their role within the discipline and ability to identify cause/effect relationships between environmental and/or cultural variables and physiological response of grapevine; b3) elaborate a general framework integrating course contents within a real-world example, with particular reference to the analysis of grapevine cultural systems in relation to the environmental, socio-economic and cultural context. c) evaluation of communication skills will give a minimum grading when the student is able communicate with the specific language of the professional field but not in a fully structured expression. Maxiumum evaluation will be given when a full control of the field-specific language will be shown together with a distinct knowledge of the professional lexicon.
EDUCATIONAL OBJECTIVES	The teaching of "Viticulture" has the purpose to give theoretical information on viticultural surface and wine production and practical knowledge necessary to establish vineyards in relation to the various production and qualitative goals. The main topics of module are vineyard establishment, plant material and nursery steps to produce different type of plant materials, rootstocks and varieties characteristics, phenology and vegetative and reproductive growth cycle. Trellis system and pruning types, and source-sink relations Canopy managment techniques: shoot thinning, shoot position, cluster thinning, leaf removal.
TEACHING METHODS	Classroom lectures and exercises, vineyard and nursery trips
SUGGESTED BIBLIOGRAPHY	Fregoni M., Viticoltura di qualita. Ed. Fregoni, 2013. III Edizione Autori vari. 2005. Manuale di Viticoltura. Edagricole Materiale fornito dal Docente

SYLLABUS

Hrs	Frontal teaching
63	World viticultural surface and wine production. The viticultural situation in Italy and in Sicily. DOCG and DOC (the short version of Denominazione di Origine Controllata e Garantita and Denominazione di Origine Controllata), list of Italians and Sicilian wines with DOCG and DOC (DOP). IGT (IGP) (the short version of Indicazione geografica tipica/protetta) in Sicily and table wine. Origin and taxonomy of Vitis spp. Phyllossera. Genetic improvement in viticulture. Clonal selection and mutation, hybridation of rootstocks and varieties. List of cultivars in Sicily and in Italy. Catagolous of Italian varieties. Meaning of cultivars and clones. Agamic propagation in viticulture. Law 1164/24.12.1969 for viticultural nursery. Different plant material. Nursery steps for production of different plant materials. Relationship between climate and viticulture, usage of bioclimate indices in viticulture. Rootstocks in viticulture and pest resistance and soil adaptation of each rootstock. Vineyard establishment and viticultural practices before planting. Site selection, planting density and row orientation. Morphology of shoot system (stem, leaf), bunch, berry, roots. Phenology and growth cycle. Reproductive cycle: bud differentiation, flowering and fruit-set, flower sterility. Bud fruitfulness, berry growth and ripening. Grape composition and fruit quality. Yield formation. Translocation of carbohydrates during the annual cycle. Vegetative cycle: main and lateral leaf surface development and canopy description as length, height, width, leaf area, number of leaf layers and shoot density. Description of leaf-to-fruit balance. Vineyard Site Selection: Climate, soil. Interactions among soil, climate, cultivar and rootstock, human practices. The concept of terroir in viticulture. Different training systems, training stages, pruning types, winter pruning, canopy managment techniques: shoot thinning, shoot position, cluster thinning, leaf removal.
Hrs	Practice
27	exercises, field and nursery trips