UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Agrarie, Alimentari e Forestali		
ACADEMIC YEAR	2021/2022		
BACHELOR'S DEGREE (BSC)	PROPAGATION AND NURSERY MANAGEMENT IN THE MEDITERRANEAN ENVIRONMENT		
INTEGRATED COURSE	HORTI-FLOWER NURSERY WITH LABORATORY		
CODE	21693		
MODULES	Yes		
NUMBER OF MODULES	2		
SCIENTIFIC SECTOR(S)	AGR/04		
HEAD PROFESSOR(S)	VETRANO FILIPPO	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)	VETRANO FILIPPO SABATINO LEO	Professore Associato Professore Associato	Univ. di PALERMO Univ. di PALERMO
CREDITS	8		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	**SABATINO LEO** Monday 9:00 11:00 Studio del docente sito presso il Dipartimento SAAF, Ed. 5. Wednesday 9:00 11:00 Studio del docente sito presso il Dipartimento SAAF, Ed. 5. **VETRANO FILIPPO** Tuesday 9:00 11:00 Studio del docente stanza 129 ed. 5 P1 Thursday 10:00 12:00 Studio del docente stanza 129 ed. 5 P1		

DOCENTE: Prof. FILIPPO VETRANO

PREREQUISITES	Basic knowledge of General and inorganic Chemistry, Principles of plant Biology
LEARNING OUTCOMES	Knowledge and comprehension of the most important concepts and methods concerning conventional and advanced propagation of vegetable and floriculture crops. Capacity to apply knowledge and comprehension in order to manage and develop the propagation of vegetable crops, annual, perennial floriculture crops/ bulbs and ornamental shrubs according to their role in the horticulture sector. Autonomy of judgment and decision with respect to various environmental conditions and different contexts in the application of modern propagation techniques in the vegetable and floriculture nursery sector . Acquire communicative skills in order to advise growers involved in the vegetable and floriculture nursery industry to design and develop propagation and production schedules related to the market demand. Comprehension capacity to modify and improve propagation systems and techniques to address new market trends of the plant nursery sector both through acquired theoretical and practical skills, continuous scientific updating, professional meeting attending.
ASSESSMENT METHODS	The oral examination aims at testing the theoretical and practical competencies of the students. An exam is considered to be passed successfully if the final grade is equal to or higher than 18/30. The threshold for sufficiency will be gained when the student shows knowledge and understanding of topics, at least in their guidelines, and has minimum levels of applied skills concerning the solution of specific case studies; he/she should possess talking abilities and a correct use of language for the specificity of the course. Below this threshold the exam will be assessed as insufficient. The more the student shows argumentative and talking capacities, besides knowledge going into details of the discipline, the more his assessment will be positive till the grade of excellence 30/30 cum laude. During the oral examination and throughout specific questions it will be tested: a) attained competencies; b) analytical capacity; c) explanatory capacity. As regard attained competencies, the oral examination will aim at testing that students have acquired a general background on the theoretical principles and laboratory skill required to propagate vegetable and floriculture crops and developed knowledge of specific study cases and protocols. As regard analytical capacity the oral examination will aim at testing that students have acquired the capacity to correlate the lecture topics. During the evaluation particular emphasis will be given to verify the student capacity to critically discuss the weaknesses and strengths of the common propagation techniques actually applied in the floriculture industry and eventually to improve them. As regard to explanatory capacity students must demonstrate adequate and appropriate language skills related to the specific nursery plant field sector.
TEACHING METHODS	lectures, remote, laboratory, technical excursions

MODULE
HORTI-FLOWER NURSERY

Prof. FILIPPO VETRANO

SUGGESTED BIBLIOGRAPHY

Iapichino G. 2012. La propagazione delle piante-Edagricole, ISBN-978-88-506-5354-6
Materiale didattico fornito dal docente (slides delle lezioni)
Hudson T., Harmann D.E., Kester F.D., Davies J.R, Geneve R.L. 2002. Plant Propagation- Prentice Hall, ISBN 0-13679235-9
Beyl C.A., Trigiano R.N. 2008. Plant Propagation Concepts and Laboratory Exercises. CRC Press, ISBN 978-1-4200-6508-4

AMBIT	70243-Fondamenti di produzioni vegetali *
INDIVIDUAL STUDY (Hrs)	68
COURSE ACTIVITY (Hrs)	32

EDUCATIONAL OBJECTIVES OF THE MODULE

Provide students specific competencies concerning the propagation techniques of the vegetable and floriculture crops
Specifically:
-theoretic knowledge on large scale sexual plant propagation
-knowledge of the principles of vegetative conventional propagation systems (separation, division, cutting, grafting) and of skill to improve them.
- Knowledge of the principles of advanced propagation methods applied in the horticulture sector such as micropropagation applied to vegetable and floriculture crops with special emphasis on in vitro propagation of herbaceous, bulbous crops and foliage plants.

SYLLABUS

Hrs	Frontal teaching
2	Course objective and examination modality. The vegetable and floriculture nursery industry: principal areas of production, evolution.
4	The most important propagation methods in the vegetable and floriculture industry. Principles and techniques to improve them.
2	Conventional and advanced methods of sexual propagation
4	Conventional and advanced methods of vegetative propagation
4	In vitro propagation applied at the vegetable and floriculture nursery industry. Meristematic tissue culture and micropropagation.
2	Study cases concerning the propagation of vegetable crops
4	Study cases concerning the propagation of floriculture crops
4	Study cases concerning the propagation of vegetable and floriculture geophites
4	Study cases concerning the propagation of foliage/indoor plants
2	Study cases concerning the propagation of shrub-ornamental plants

Hrs	Others
4	Technical excursions at vegetable and floriculture plant nurseries

MODULE
LABORATORY FOR THE PROPAGATION OF HORTICULTURAL AND FLORICULTURAL SPECIES

Prof. LEO SABATINO

SUGGESTED BIBLIOGRAPHY

Iapichino G. 2012. La propagazione delle piante-Edagricole, ISBN-978-88-506-5354-6
Materiale didattico fornito dal docente (slides delle lezioni)
Hudson T., Harmann D.E., Kester F.D., Davies J.R, Geneve R.L. 2002. Plant Propagation- Prentice Hall. ISBN 0-13679235-9
Beyl C.A., Trigiano R.N. 2008. Plant Propagation Concepts and Laboratory Exercises. CRC Press ISBN 978-1-4200-6508-4

AMBIT	70274-Altre conoscenze utili per l'inserimento nel mondo del lavoro
INDIVIDUAL STUDY (Hrs)	60
COURSE ACTIVITY (Hrs)	40

EDUCATIONAL OBJECTIVES OF THE MODULE

Provide students practical knowledge concerning the propagation techniques of the vegetable and floriculture crops
In detail:
- practical knowledge on large scale sexual plant propagation
- practical knowledge of the principles of vegetative conventional propagation systems (separation, division, cutting, grafting) and of skill to improve them.
- knowledge of the principles of advanced propagation methods applied in the horticulture sector such as micropropagation applied to vegetable and floriculture crops with special emphasis on in vitro propagation of herbaceous, bulbous crops and foliage plants.

SYLLABUS

Hrs	Workshops
1	Course objective and examination modality
6	Sexual propagation of vegetable crops
6	Sexual propagation of floriculture crops
7	Vegetative propagation techniques of vegetables (tubers, rhizomes, cutting and grafting)
12	Vegetative conventional propagation systems of perennial flowers and geophytes (separation, division, cutting, grafting, bulbs, corms and rhizomes).
4	In vitro propagation techniques - protocols for in vitro propagation of vegetable and floriculture crops.

Hrs	Others
4	Technical excursion at nurseries.