

COURSE SYLLABUS 2019-20

Basic information on the course			
Course:	DIAGNOSIS OF NUTRIENTS IN CROPS		
Course code:	70784241	Plan:	Master in Mediterranean Greenhouse Horticulture
Academic Year:	2019 20	Undergraduate/Graduate:	Graduate
Degree Year:	1	Type:	
Duration:			
TIME DISTRIBUTION ACCORDING TO REGULATIONS			
Credits:	3		
Total time:	75 hours		
USE OF LEARNING PLATFORM:			

TEACHERS			
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OTHER IMPORTANT INFORMATION

Content justification

Nutrient management is using crop nutrients as efficiently as possible to improve productivity while protecting the environment. The need for appropriately qualified and proactive advisers to support the sustainable production horticultural crops is essential. Detailed planning of plant and crop nutrition is required to reduce the environmental impact on soil, water and air. The use of soil, substrates, nutrient solution and plant sampling techniques for nutrient management in relation to understand nutrient status and demand.

Courses related in Study Plan

70782214 Nutrición Vegetal y Fertilización

Pre-required knowledge

COMPETENCES

Basic and general competences

Basic competences

- Basic knowledge of the profession
- Ability to solve problems

General competences

- Understand and possess knowledge
- Ability to make judgments

Key competences University of Almeria

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Specific competences

LEARNING OUTCOMES

1. Nutrient Diagnosis tools management in Mediterranean greenhouse horticultural systems.
2. Improving nutrient management to optimize hydric and mineral nutrition.

PLANNING	
Contents	
Module	1. Nutrient requirements of greenhouse grown crops
Content	Nutrient requirements of greenhouse grown crops. Absorption of nutrients by crops. Strategies of crop nutrition management Factors affecting plant nutrition. Salinity
Module	2. Determination of the nutritional status of the crops
Content	Tools available for determining nutritional status of crops. Sampling, analysis and recommendations. Nutritional diagnosis systems.
Learning system and methodology	
Teaching group: Seminars (2+2.5+2+2 hours in class)	
Work group: Practical case (2+2 hours in class), lecture-debate (4 hours in class), seminars (2hours in class), practical work (2 hours in class)	
Teaching innovation activities	

COMPETENCY ASSESSMENT
Criteria and assessment tools
Tests, exercises, problems.
Observations of the process.
Final evaluation of reports, works, projects, etc.
Follow-Up Mechanisms
Participation in communication tools (discussion forums, emails)
Delivery of activities in class
Delivery of activities in virtual classroom
Functional diversity / Functional disability.
<ul style="list-style-type: none"> • Those students with disabilities or special educational needs can get in contact with the Delegation of the Rector for the Functional Diversity (http://www.ual.es/discapacidad) to receive the appropriate guidance and advice in order to facilitate their instructional, learning and training

processes. Likewise, these students may request the implementation of the necessary and suitable adaptations of content, methodology and evaluation that guarantee equal opportunities in their academic development. The processing of any personal data or aggregated information regarding these aforementioned students, in full compliance with the GDPR, is strictly confidential. Faculties and academic staff lecturing the course referenced by this guide/document will be in charge of applying the recommended adaptations approved by the Delegation of the Rector for the Functional Diversity, this fact will be, therefore, notified to the School or Faculty as well as to the coordinator of the academic course.

COURSE MATERIALS

Recommended course materials

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Complementary

Franco, J.J., Henao, M., Guzmán, M., Cabrera, R.. Determining Nutrient Diagnostic Norms for Greenhouse Roses. 2013.
Escalona, A., Salas, M.C., Coutinho, C., Guzmán, M. Crecimiento y concentración de iones en los tejidos de menta y salvia regadas con aguas salinas para su uso en jardinería. 2013.
Escalona, A., Salas, M.C., Coutinho, C., Guzmán, M.. How does salinity affect mineral ion relations and growth of Lobelia erinus for use in urban landscaping? . 2013.

Other materials

Couse materials available in UAL's library

WEBSITE

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