

DETAILS OF THE SUBJECT

Title: FITOTECNIA

Code: 100952

Degree/Master: GRADO DE INGENIERÍA AGROALIMENTARIA Y DEL MEDIO RURAL

Year: 2

Name of the module to which it belongs:

Field: BASES TECNOLÓGICAS DE LA PRODUCCIÓN VEGETAL

Character: OBLIGATORIA

Duration: SECOND TERM

ECTS Credits: 4.5

Classroom hours: 45

Face-to-face classroom percentage: 40%

Non-contact hours: 68

Online platform:

TEACHER INFORMATION

Name: FERERES CASTIEL, ELIAS

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Area: PRODUCCIÓN VEGETAL

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Name: SORIANO JIMENEZ, MARIA AUXILIADORA

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Name: VILLALOBOS MARTIN, FRANCISCO

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SPECIFICS OF THE SUBJECT

REQUIREMENTS AND RECOMMENDATIONS

Prerequisites established in the study plan

None.

Recommendations

Level B2 in English or equivalent would be recommended. Basic knowledge on Plant Physiology and Soil Science would be also helpful for following this class.

SKILLS

CB1
CB2
CEC2
CEC9
CEC10

OBJECTIVES

The objective of this course is to understand and apply the basics of crop productivity to the technologies for crop management with a quantitative approach and an emphasis on the sustainability of agricultural systems and environmental problems of agriculture.

CONTENT

1. Theory contents

1. Crops and the environment: energy balance and water balance.
2. Environmental control: windbreaks, temperature modification and frost control.
2. Determinants of crop productivity.
3. Sowing and crop rotations.
4. Soil management and soil conservation.
5. Water management and control of salinity.
6. Fertilizer management and fertigation.
7. Cropping systems.
8. Farming and the sustainability of food systems

2. Practical contents

- 1- Assessment of crop productivity (potential and water limited)
- 2- Water balance components
- 3- Calculation of crop ET and crop water irrigation requirements
- 4- Fertilizer program
- 5- Irrigation schedule
- 6- leaching requirement for control of salinity
- 7- Evaluation of frost risk

METHODOLOGY

General clarifications on the methodology and methodological adaptations for part-time students

Each student will work on a practical project consisting of a series of calculations related to the main agronomic techniques (irrigation schedule, fertilization program, soil conservation plan, etc.). The evaluation will be based on the quality of the report submitted and the oral defense of its contents.

Face-to-face activities

Activity	Large group	Medium group	Small group	Total
Assessment activities	3	-	2	5
Case study	4	-	5	9
Conference	2	-	-	2
Lectures	25	-	-	25
Tutorials	-	-	4	4
Total hours:	34	-	11	45

Not on-site activities

Actividad	Total
Exercises	10
Finding information	10
Problems	18
Self-study	30
Total hours:	68

WORK MATERIALS FOR STUDENTS

Practical cases and examples
Dossier
Exercises and problems
Manual of the subject

EVALUATION

Skills	Tools		
	Assignments and projects	Group work	Multiple choice exam
CB1			X
CB2	X	X	
CEC10	X		
CEC2	X	X	X
CEC9	X	X	
Total (100%)	50%	10%	40%
Minimum grade.(*)	4	4	4

(*) Minimum grade necessary to calculate the average

Minimum score to eliminate content and period of validity for partial qualifications: 5,0. *Indefinido*

General clarifications on evaluation and methodological adaptation for part-time students:

The evaluation will be based on the quality of the report submitted and the oral defense of its contents.

Value of attendance in the final grade: 20%

Qualifying criteria for obtaining honors: *More than 9.0 in both exams and practical project*

1. Basic Bibliography:**Bibliografía básica:**

Villalobos, F.J., L. Mateos, F. Orgaz y E. Fereres. 2009. Fitotecnia. Bases y tecnologías de la producción agrícola. 2ª Edición. Editorial Mundi-Prensa. Madrid. 496 p.

2. Further reading:

- Allen R.G., Pereira L.S., Raes D. y M. Smith. 2006. Evapotranspiración del cultivo: Guías para la determinación de los requerimientos de agua de los cultivos. Estudios FAO Riego y Drenaje 56. FAO, Roma. 298 p.

- Connor D.J., Loomis R.S. and Cassman K.G. 2011. Crop ecology: Productivity and magement in agricultural systems. Cambridge University Press. 568 p.

- Snyder R.L y J.P. Melo-Abreu. 2010. Protección contra las heladas: Fundamentos, práctica y economía. Volumen I. Serie sobre el Medio Ambiente y la Gestion de los Recursos Naturales. No. 10. FAO, Roma.

- Snyder R.L, J.P. Melo-Abreu y S. Matulich. 2010. Protección contra las heladas: Fundamentos, práctica y economía. Volumen II. Serie sobre el Medio Ambiente y la Gestion de los Recursos Naturales. No. 10. FAO, Roma.

COORDINATION CRITERIA

- Jobs valid for various subjects

SCHEDULE

Period	Activity				
	Assessment activities	Case study	Conference	Lectures	Tutorials
1# Week	0	1	0	2	0
2# Week	0	1	0	2	0
3# Week	0	0	0	2	1
4# Week	0	1	0	2	0
5# Week	1	0	0	2	0
6# Week	0	0	1	2	0
7# Week	0	0	0	2	1
8# Week	0	1	0	2	0
9# Week	1	1	0	1	0
10# Week	0	1	0	2	0
11# Week	0	0	0	2	1
12# Week	0	0	1	2	0
13# Week	1	1	0	1	0
14# Week	0	2	0	1	0
15# Week	2	0	0	0	1
Total hours:	5	9	2	25	4