



Universitat de Lleida

## DEGREE CURRICULUM

# ORGANIC FARMING

Coordination: SANTIVERI MORATA, FRANCISCA

Academic year 2020-21

## Subject's general information

Subject name	ORGANIC FARMING			
Code	102502			
Semester	2nd Q(SEMESTER) CONTINUED EVALUATION			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Agricultural and Food Engineering	4	OPTIONAL	Attendance-based
Course number of credits (ECTS)	6			
Type of activity, credits, and groups	Activity type	PRACAMP		TEORIA
	Number of credits	1.2		4.8
	Number of groups	1		1
Coordination	SANTIVERI MORATA, FRANCISCA			
Department	CROP AND FORESTRY SCIENCES			
Important information on data processing	Consult <a href="#">this link</a> for more information.			
Language	Catalan: 45% Spanish: 50% English: 5%			
Distribution of credits	Face to face hours: 60 (this course, with mixed teaching, 50% of the hours will be in the classroom and the other 50% with synchronous online activities using the videoconferencing tool) Autonomus work hours: 90			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
COSTA TURA, JOAN	joan.costatura@udl.cat	1	
MARTIN CLOSAS, LLUIS	lluis.martin@udl.cat	1	
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SANTIVERI MORATA, FRANCISCA	paquita.santiveri@udl.cat	3,4	

## Subject's extra information

Ecological Agricultural Production is an optional subject that provides a specialization in ecological crop production systems. In it, they establish the bases of Agroecology and explain the differences between the conventional production techniques and the ecological production, as well as the most important characteristics in the main crop groups. For this reason, we require the knowledge of some previous courses as Biology, Plant Physiology, Edaphology and Climatology, Bases of plant production, Crop Protection, Field Crop Technology, Field Crops and Horticulture. This is a theoretical and practical subject, with theoretical explanations that complement both practical case resolutions and technical visits.

## Learning objectives

### Targets

The objectives to be achieved include:

- Define the concepts of Organic Agriculture and Agroecology
- Describe the agronomic bases of Ecological Agricultural Production
- Understand the most important characteristics of the ecological production of extensive crops, horticultural crops and fruit trees.
- Evaluate the sustainability of organic production systems

## Competences

### General skills

CG6. Ability to direct and manage all types of agri-food industries, farms and livestock, urban and / or rural green spaces, and public or private sports areas, with knowledge of new technologies, quality processes, traceability and certification and the techniques of marketing and marketing of food products and cultivated plants

CG8. Ability to solve problems with creativity, initiative, methodology and critical reasoning.

## Contents

I. Introduction to Organic Agriculture (8 hours) (PVCF)

1. The Green Revolution as the origin of current agriculture (2 hours).
  2. Definition of Sustainable Agriculture, Organic Agriculture, Biodynamics. Agricultural and economic importance (4 hours)
  3. Legislation and certification of the Organic Agriculture (2 hours)
- II. Basics of organic production (12 hours) (PVCF)
4. Plant material: autochthonous varieties and conservation of the biodiversity (2 hours)
  5. Fertilization in organic farming (3 hours)
  6. Control of the flora arvensis (2 hours)
  7. Protection of the crop (2 hour)
  8. Crop rotations and associated crops (3 hours)
- III. Organic crop production (18 hours) (PVCF and HBJ)
9. Organic production of extensive crops (2 hours, PVCF)
  10. Organic production of vegetables (6 hours, HBJ)
  11. Organic production of fruit trees (6 hours, HBJ)
  12. Production of organic fodder (2 hours, PVCF)
- IV. Agroecology (6 hours) (MACS)
14. Agroecology and Rural Development
- V. Sustainability assessment (2 hours) (PVCF)
15. Approaches to sustainability assessment

## Practical activities

## Seminars

Sustainability assessment (2 hours)

### Technical visits

- 1.- Visit to farms of ecological production of extensive crops (4 hours)
- 2.- Visit to farms of ecological production of horticultural (4 hours)
- 3.- Visit to farms of ecological fruit production (4 hours)

## Methodology

Activity	Description	Classrom activity		Home activity		Evaluation	Total	
		Objectives	Hours	Sudent's work	Hours	Hours	Hours	ECTS

# ORGANIC FARMING 2020-21

<b>Master class</b>	Master class	Explanation of main concepts	46	Study: Know, understand and synthesize knowledge.	40	4	90	3,6
			"	Case resolution	27		42	1,1
<b>Seminars</b>	Participatory class	Application of the theoretical concepts taught in the master classes	2	Problems and cases	4	2	8	0,3
<b>Visits</b>	Field practices	Application of the theoretical concepts taught in the master classes Professional practice	12	Write report	13		25	1
<b>Totals</b>		<b>60</b>			<b>84</b>	<b>6</b>	<b>150</b>	<b>6</b>

## Observations

25 hours of total activity per ECTS credit have been considered.

Adaptation to the mixed teaching of the course 2020-21: The face-to-face classes will be done partially with videoconference. In this case, guided activities will be resolved from time to time during the hours assigned as non-contact teaching with the teacher's advice (by videoconference).

## Development plan

Activity	Content	Objective	Hours	Acumulated Hours	Evaluation Theory
<b>Master class</b>	Lesson 1	1	2	2	T1
<b>Master class</b>	Lesson 2	1	4	6	"
<b>Master class</b>	Lesson 3	1	2	8	"
<b>Master class. Case study.</b>	Lesson 4	2	2	10	"
<b>Master class. Case study.</b>	Lesson 5	2	3	13	"
<b>Master class. Case study.</b>	Lesson 6	2	2	15	"
<b>Master class. Case study.</b>	Lesson 7	2	2	17	"
<b>Master class. Case study.</b>	Lesson 8	2	4	20	"
<b>Master class. Case study.</b>	Lesson 9	3	2	22	T2
<b>Visit</b>	Visita1	3	4	26	"

<b>Master class. Case study..</b>	Lesson 10	3	6	32	"
<b>Visit</b>	Visit 2	3	4	36	"
<b>Master class. Case study.</b>	Lesson 11	3	6	42	"
<b>Visit</b>	Visit 3	3	4	46	"
<b>Master class. Case study.</b>	Lesson 12	3	2	48	"
<b>Master class. Case study.</b>	Lesson 13	3	2	50	"
<b>Master class. Case study.</b>	Lesson 14	1-2-3	6	54	
<b>Master class</b>	Lesson 15	4	2	56	"
<b>Seminar</b>	Seminar 1	4	2	58	"
<b>TOTALS</b>			60		

## Evaluation

Activity	Evaluation	Number	% qualification
<b>Master class</b>	Written exams	2	65
<b>Team work</b>	Oral presentation	1	15
<b>Seminars</b>	Reports and classroom presentation	1	5
<b>Visits</b>	Reports	4	15
<b>Total</b>			100

### Observations

Attendance at all visits and the seminar is mandatory.

Partial exams are passed with 5.

For the purposes of the final grade, in order to pass the subject you must have obtained a grade equal to or higher than 5 points in the different parts of the course.

## Bibliography

### Basic references

Astier, M., Masera, O.R. Galcán-Miyoshi, Y. 2008. Evaluación de sustentabilidad: un enfoque dinámico y multidimensional. SEAE.

Barker, A. 2010. Science and Technology of Organic Farming. CRC Press

De las Heras, J., Fabeiro, C., Meco, R. 2003. Fundamentos de agricultura ecológica : realidad actual y

perspectivas. Universidad de Castilla-La Mancha

Kristiansen, P., Taji, A., Reganold, J. 2006. Organic agriculture: a global perspective. Ithaca, New York : Comstock Pub. Associates

Lampkin, N. 1998. Agricultura ecológica. Munid Prensa. Madrid.

## **Complementary references**

Guzmán Casado, G., Alonso A. M. 2008. Uso de abonos verdes. Ministerio de Medio Ambiente y Medio Rural y Marino. Secretaría General Técnica. Centro de Publicaciones

Guzmán Casado, G., Alonso A. M. 2008. Asociaciones y rotaciones. Ministerio de Medio Ambiente y Medio Rural y Marino. Secretaría General Técnica. Centro de Publicaciones

Labrador, J.; Altieri, M.A. 2001. Agroecología y desarrollo sostenible: aproximación a los fundamentos agroecológicos para la gestión sustentable de agrosistemas mediterráneos. Universidad de Extremadura. Madrid. Mundi-Prensa.

Meco, R. 2001. Control de la flora arvense en agricultura ecológica. Madrid. Ministerio de Agricultura, Pesca y Alimentación. Secretaría General Técnica.

Nicholls, C.I., Altieri, M.A., Sánchez, J. 2001. Manual práctico de control biológico para una agricultura sustentable. Asociación Vida Sana: SEAE.