

## COURSE OF STUDY Sustainable Agriculture Techniques - LP 02

ACADEMIC YEAR 2023/2024

ACADEMIC SUBJECT Organic and sustainable livestock

*Module of the Integrated Course: Agro-forestry livestock systems (98 ECTS)*

General information	
Academic subject	Organic and sustainable livestock
Degree course	Sustainable Agriculture Techniques - LP 02
Academic Year	2023/2024
European Credit Transfer and Accumulation System (ECTS)	4 (3 CFU Lectures + 1 CFU Laboratory and training activity)
Language	Italian
Academic calendar (starting and ending date)	
Attendance	No

Professor/ Lecturer	
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Department and address	Department of Soil, Plant and Food Science – Via Amendola 165/A, II floor
Virtual headquarters	Tutoring can be performed by using e-learning platforms
Tutoring (time and day)	From Monday to Friday (9.00 – 12.00), upon appointment

Syllabus	
Learning Objectives	Knowledge of the livestock environmental impact, breeding technologies and organic livestock
Course prerequisites	Knowledge of animal biology and livestock species
Contents	<ol style="list-style-type: none"> <li>1. Relationship between animal husbandry and the environment</li> <li>2. Environmental impact of livestock</li> <li>3. Manure production and management</li> <li>4. Organic livestock: law and structural requirements for the main species</li> <li>5. Rational management of pasture</li> </ol>
Books and bibliography	Notes and materials distributed during the class
Additional materials	

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
<b>Hours</b>			
100	24	14	62
<b>ECTS</b>			
4	3	1	
Teaching strategy			
Lectures will be carried out with the support of PC assisted tools (PowerPoint)			

	slides), in depth video showing, group works and technical visits to livestock farms.
<b>Expected learning outcomes</b>	
<b>Knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Knowledge about animal breeding</li> <li>○ Knowledge on different manure management</li> <li>○ Knowledge on organic livestock.</li> </ul>
<b>Applying knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>○ Ability to apply, for the different livestock specie, the manure management techniques in accordance with environmental impact, animal welfare and pasture management</li> </ul>
<b>Soft skills</b>	<ul style="list-style-type: none"> <li>• <i>Making informed judgments and choices</i> <ul style="list-style-type: none"> <li>○ Ability to design, manage and verify the breeding technologies in order to improve the environmental and productive sustainability of livestock</li> </ul> </li> <li>• <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Ability to describe breeding techniques and their influence on animal welfare.</li> </ul> </li> <li>• <i>Capacities to continue learning</i> <ul style="list-style-type: none"> <li>○ Ability to deepen, study and gain update on new animal breeding techniques</li> </ul> </li> </ul>

<b>Assessment and feedback</b>	
Methods of assessment	<p>For students enrolled in the academic year in which teaching is carried out, there is a mid-term exam consisting in an oral test on arguments developed during theoretical and theoretical-practical lessons. The mark of this test contributes to the evaluation of the final exam and is valid for one academic year. Students who fail the first mid-term exam must attend the general exam.</p> <p>For foreign students the oral exam will be held in English.</p>
Evaluation criteria	<ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i> <ul style="list-style-type: none"> <li>○ Good level in the description of existing relationships among systems and technologies of livestock husbandries, animal welfare and environmental impact</li> <li>○ Good level of insight in describing the organic breeding systems addressed to the improvement of the environmental and productive sustainability <ul style="list-style-type: none"> <li>• <i>Applying knowledge and understanding</i></li> </ul> </li> <li>○ Methodological approach in describing issues related to the sustainability of the livestock productions in relation to the livestock species.</li> <li>○ Capacity to analyse the quality of manure management.</li> <li>○ Finding of functional management of pasture according to sustainability criteria. <ul style="list-style-type: none"> <li>• <i>Autonomy of judgment</i></li> </ul> </li> <li>○ Ability to analyse different production systems in function of livestock species.</li> <li>○ Capacity to design, manage and verify sustainable breeding technologies of livestock according to sustainability criteria. <ul style="list-style-type: none"> <li>• <i>Communicating knowledge and understanding</i></li> </ul> </li> <li>○ Ability to describe animal organisms, biological phenomena, physiological states interacting in the farm under consideration. <ul style="list-style-type: none"> <li>• <i>Communication skills</i></li> </ul> </li> <li>○ Effectiveness and clarity in the exposure of the topics. <ul style="list-style-type: none"> <li>○ <i>Capacities to continue learning</i></li> </ul> </li> <li>○ Ability to apply knowledge and skills in problem solving activities in order to solve new and complex theoretical-practical problems.</li> </ul> </li> </ul>
Criteria for assessment and attribution of the final mark	<p>The student competence evaluation, in both mid-term and final exam, is based on predefined criteria, as detailed in Attachment A of the Academic Regulation of the</p>



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	Master Degree Program. For students who have taken the exemption test, the evaluation of the final exam is expressed by the arithmetic average of the marks obtained in the exemption test and in the final exam
<b>Additional information</b>	