

COURSE OF STUDY *Techniques for Sustainable Agriculture*

ACADEMIC YEAR2023-2024

NAME OF THE COURSE *Herbaceous cropping systems*

General information	
Year of the course	I
Academic calendar (starting and ending date)	I semester
Credits (CFU/ETCS):	5
SSD	AGR/02
Language	Italian
Mode of attendance	In Person

Professor/ Lecturer	
Name and Surname	Cataldo Pulvento
E-mail	cataldo.pulvento@uniba.it
Telephone	0805443007
Department and address	University of Bari, Department of Soil, Plant and Food Sciences (Di.SSPA), Via Amendola 165/A, 70126 Bari
Virtual room	Teams platform (code to be defined)
Office Hours (and modalities: e.g., by appointment, on line, etc.)	Every afternoon from Monday to Thursday, time to be agreed by e-mail

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
110	24	28	48
CFU/ETCS			
5	3	2	

Learning Objectives	The main objective is to provide the student with information on the agronomic aspects of cropping systems on a territorial scale. Emphasis is placed above all on the use of the main herbaceous crops (cereals, oilseeds, legumes, sugar beets, industrial tomatoes) and the management of crop rotation, in order to improve agricultural performance (yield and quality) by reducing the impact environment and the use of natural resources.
Course prerequisites	Basic knowledge of plant biology and botany

Teaching strategie	Lectures with powerpoint aid, video material. Field and/or on-farm exercises.
Expected learning outcomes in terms of	
Knowledge and understanding on:	Dublin 1 Descriptor: <ul style="list-style-type: none"> ○ Knowledge of sustainable technologies for the management of herbaceous productions in their quantitative, qualitative and environmental aspects; ○ Knowledge of technologies related to the transformation and marketing of products; ○ Knowledge of the technical means and products of the agricultural

	<p>sector with particular reference to the sustainable agronomic, economic and ecological protection and management of resources; Identification of the main plant species and subspecies treated</p> <ul style="list-style-type: none"> ○
Applying knowledge and understanding on:	<ul style="list-style-type: none"> ○ Making crop choices in harmony with environmental variables and primary production activities outside the farm ambit, at the level of entire territories (administrative areas, hydrographic basins, etc.), focusing on the geographical and pedo-climatic specificities of these relationships.
Soft skills	<p>Dublin 3 Descriptor:</p> <p>Judgment autonomy</p> <ul style="list-style-type: none"> ○ ability to identify objective data relating to the cultural context and formulate a correct plan of interventions <p>Dublin 4 Descriptor:</p> <p>Communication skills</p> <ul style="list-style-type: none"> ○ At the end of the course the student should be able to communicate information, ideas, problems and solutions to specialist interlocutors (agricultural entrepreneurs, professionals) and non-specialists in writing and orally. <p>Dublin 5 Descriptor:</p> <p>Ability to learn independently</p> <ul style="list-style-type: none"> ○ At the end of the course the student should be able to learn and acquire the basic concepts necessary to undertake subsequent studies with a high degree of autonomy
Syllabus	
Content knowledge	<ul style="list-style-type: none"> • Principles of Agronomy • Crop systems: Principles and Management • Principles of Ecology in Plant Production • Winter cereals: wheat <ul style="list-style-type: none"> - origins and diffusion - bioagronomic aspects associated with nutritional, qualitative and technological characteristics • Spring cereals: corn <ul style="list-style-type: none"> - origins and diffusion - bioagronomic aspects associated with nutritional, qualitative and technological characteristics • Grain legumes: broad beans, chickpeas, <ul style="list-style-type: none"> - origins and diffusion - bioagronomic aspects associated with nutritional, qualitative and technological characteristics • Sugar-crops: sugar beet <ul style="list-style-type: none"> - origins and diffusion - bioagronomic aspects associated with nutritional, qualitative and technological characteristics • Oil crops: rapeseed <ul style="list-style-type: none"> - origins and diffusion • Open field vegetables: tomato <ul style="list-style-type: none"> - origins and diffusion <p>- bioagronomic aspects associated with nutritional, qualitative and technological characteristics</p>
Texts and readings	<ul style="list-style-type: none"> • Verso un approccio integrato allo studio dei sistemi colturali. Franco Angeli ed., Milano, 121-144. • Baldoni, R., Giardini, L., Coltivazioni Erbacee – Cereali Proteaginose. Patron Editore. 2002

	<ul style="list-style-type: none"> • Baldoni, R., Giardini, L., Coltivazioni Erbacee – Piante oleifere, da zucchero, da fibra, orticole e aromatiche. Patron Editore. 2002 • Cecon, Fagnano, Grignani, Monti, Orlandini-Agronomia, Edises
Notes, additional materials	
Repository	Power point slides

Assessment	
Assessment methods	The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in the laboratory.
Assessment criteria	<ul style="list-style-type: none"> • Knowledge and understanding: <ul style="list-style-type: none"> o Knowledge of the topics covered during the course • Applied knowledge and understanding: <ul style="list-style-type: none"> o Application of acquired knowledge to real cases • Making judgments: <ul style="list-style-type: none"> o Ability to autonomously and critically elaborate complex problems and formulate adequate solutions in the field of herbaceous vegetable production • Communication skills: <ul style="list-style-type: none"> o Ability to express with technical-scientific and pertinent language o Clarity of presentation • Ability to learn: <ul style="list-style-type: none"> o Ability to explore the topics covered independently
Final exam and grading criteria	For the evaluation of the exams, the Commission has a maximum of 30/30 cum laude. To pass the exam, the student must achieve a minimum score of 18/30.
Further information	