

COURSE OF STUDY STAF

ACADEMIC YEAR 2023/2024

ACADEMIC SUBJECT Agronomy (Module of I.C. Agronomy and Tree cultivation – 9 CFU)

General information	
Year of the course	III
Academic calendar (starting and ending date)	II semester (March 4, 2024-June 14, 2024)
Credits (CFU/ETCS):	6
SSD	AGR/02
Language	Italian
Mode of attendance	Not compulsory

Professor/ Lecturer	
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Virtual room	
Office Hours (and modalities: e.g., by appointment, on line, etc.)	

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
6	32	28	90
CFU/ETCS			
Es. 6	4	2	

Learning Objectives
<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Knowledge of climatic factors, agronomic aspects of soil, water-soil relationships, tillage techniques, dry farming, irrigation and fertilization techniques, crop systems, weed control and agro-ecosystems. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to understand the influence of agronomic techniques, the climate and the physical, chemical and microbiological characteristics of the soil on the production and quality of agricultural crops. ○ Acquire the ability to develop management programs for the main agronomic techniques <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Ability to carry out a critical analysis of the effects of agronomic techniques, the climate and the physical, chemical and microbiological characteristics of the soil on the production and quality of agricultural crops. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the effects of agronomic techniques on the soil-plant-

	<p>atmosphere system.</p> <p><i>Capacities to continue learning</i></p> <p>The expected learning capacities, in terms of knowledge and skills, are listed in Annex A of the Study Course Regulations (expressed through the European Degree Program descriptions)</p>
Course prerequisites	Basic knowledge of mathematics/arithmetic/geometry, physics, chemistry, ecology and plant biology
Teaching strategie	<p>Lectures, 4 CFU (32 hours)</p> <p>Exercises in the classroom, laboratory and technical visits, 2 CFU (28 hours).</p> <p>E-learning platforms (eg Teams) can be used in response to specific needs or conditions of opportunity that may arise during the course</p>
Expected learning outcomes in terms of	
Knowledge and understanding on:	<ul style="list-style-type: none"> • climatic factors • agronomic aspects of agricultural soil • water-soil-crop relationships • soil tillage techniques • dry farming and limited water resources management techniques • irrigation and fertilization • cultivation systems, the fight against weeds and agricultural ecosystems.
Applying knowledge and understanding on:	<ul style="list-style-type: none"> • Ability to understand the influence of agronomic techniques, the climate and the physical, chemical and microbiological characteristics of the soil on the production and quality of agricultural crops • Ability to develop management programs for the main agronomic techniques
Soft skills	<p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Ability to carry out a critical analysis of the effects of the cultivation techniques, the climate and the physical, chemical and microbiological characteristics of the soil on the production and quality of agricultural crops. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the effects of cultivation techniques on the soil-plant-atmosphere system. <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ The expected learning capacities, in terms of knowledge and skills, are listed in Annex A of the Study Course Regulations (expressed through the European Degree Program descriptions)
Syllabus	
Content knowledge	The agroecosystem and its components: soil and atmosphere; Productivity of plant communities. Excessive water management and irrigation. Protective structures. Tillage. Fertilization. Weed management. Reproduction and propagation. Crop associations and rotations. Farming systems: conventional, conservative, biological, precision. Dry farming.
Texts and readings	<ul style="list-style-type: none"> • Ceccon P., Fagnano M., Grignani C., Monti M., Orlandini S., 2017. Agronomia. EDISES, Napoli ISBN 978 88 7959 965 8 • Giardini L.: L'AGRONOMIA (per conservare il futuro), Patron editore, Bologna, 2012
Notes, additional materials	Notes from the lectures and didactic material distributed during the course.

Repository	
Assessment	
Assessment methods	<p>The exam consists of an oral test on the topics developed during the theoretical and theoretical-practical lesson hours in the classroom and in the laboratory / field, as reported in the Didactic Regulations of the first level degree course STAF (art.9) and in the plan of study (Annex A).</p> <p>The assessment of the student's preparation takes place on the basis of pre-established criteria, as detailed in Annex A of the Didactic Regulations of the first level degree course STAF.</p>
Assessment criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Evaluate the ability to understand and highlight the influence of agronomic techniques, the climate and the physical, chemical and biological characteristics of the soil on the production and quality of agricultural crops. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the effects of the main aspects of cultivation technique on the agronomic and environmental response of the soil - plant - atmosphere system, and to carry out calculations functional to the correct implementation of agronomic interventions. <p><i>Autonomy of judgment</i></p> <ul style="list-style-type: none"> ○ Express reasonable hypotheses based on scientific criteria about the effects of agronomic techniques, climate and physical, chemical and microbiological characteristics of the soil on the production and quality of agricultural crops. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Being able to independently develop, on an individual level, effective learning paths of the course contents, aimed at enhancing the proposed training experience. <p><i>Communication skills</i></p> <ul style="list-style-type: none"> ○ Evaluation of personal skills aimed at communication and judgment, both on a technical and human and ethical level. <ul style="list-style-type: none"> ○ <i>Capacities to continue learning</i>
Final exam and grading criteria	<p>The assessment of the student's grade takes place on the basis of pre-established criteria, as detailed in Annex A of the Didactic Regulations of the first level degree course STAF, which refer to the ability to exhibit and to master the contents. For students who have taken the eventual intermediate test during course, the evaluation of the final exam is expressed out of thirty, taking the average of the marks obtained.</p>
Further information	