

COURSE OF STUDY *Bachelor degree: Food Science and Technology (L26)*
ACADEMIC YEAR *2023-2024*
ACADEMIC SUBJECT *Quality in Field crops (3 CFU) - I.C. Genetic traceability and Quality in Field crops (6 ECTS)*

General information	
Year of the course	<i>Third</i>
Academic calendar (starting and ending date)	<i>First semester (September 25th, 2023 – January 19th, 2024)</i>
Credits (CFU/ETCS):	<i>3</i>
SSD	<i>Agronomy and Field Crops (AGR/02)</i>
Language	<i>Italian</i>
Mode of attendance	<i>No Compulsory</i>

Professor/ Lecturer	
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Department and address	<i>DIP. DISSPA – Università degli Studi di Bari</i>
Virtual room	<i>Microsoft Teams</i>
Office Hours (and modalities: e.g., by appointment, on line, etc.)	<i>Monday to Friday by appointment only.</i>

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
<i>75</i>	<i>16</i>	<i>14</i>	<i>45</i>
CFU/ETCS			
<i>3</i>	<i>2</i>	<i>1</i>	

Learning Objectives	The student will acquire knowledge and skills on the biology of field crops and on the cultural and environmental factors influencing the quality of the production destined for industrial transformation. Furthermore, knowledge will be acquired on the analytical methodologies capable of determining their quality and on the tools to interpret the result.
Course prerequisites	Basic knowledge of Biology, Botany and Chemistry.

Teaching strategie	Course topics are addressed with the aid of Power Point presentations, case study analysis, reading of regulatory texts, and classroom, laboratory or field practice.
Expected learning outcomes in terms of	
Knowledge and understanding on:	<ul style="list-style-type: none"> Knowledge about the relationships between agronomic and cultural problems and the quality of vegetable raw materials.

	<ul style="list-style-type: none"> ● Knowledge about the analytical methodologies capable of determining their quality. ● Knowledge about on the tools to interpret the result.
Applying knowledge and understanding on:	<ul style="list-style-type: none"> ● Applying knowledge relating to the influence of cultivation techniques on the quality of raw materials obtained from field crop production in order to gain awareness in production choices.
Soft skills	<ul style="list-style-type: none"> ● Making informed judgments and choices: <ul style="list-style-type: none"> ○ Ability to acquire adequate skills to carry out a critical analysis of the technical-cultural itineraries of the main food and condiment crops based on the qualitative and technological requirements essential for products intended for fresh or processed consumption. ● Communicating knowledge and understanding: <ul style="list-style-type: none"> ○ Ability to describe the basic characteristics of the biology, phenology and physiology of herbaceous plants of agricultural interest, of the variety aptitudes, of the cultivation techniques and of their influence on the qualitative and technological characteristics. ● Capacities to continue learning: <ul style="list-style-type: none"> ○ Ability to deepen and update their knowledge regarding the effects of cultivation techniques on the quality of raw materials obtained from field crop production.
Syllabus	
Content knowledge	<ul style="list-style-type: none"> ● Classification of food crops and their contribution to human nutrition. Illustrative case studies. ● Geographical distribution and production of the main field food crops. ● Origin, areas of expansion and main agronomic aspects connected with the qualitative and technological characteristics of the main cereals, legumes, oily crops, sugar beet, potato, tomato, basil, mint, oregano.
Texts and readings	<ul style="list-style-type: none"> ● Lecture notes and lecture materials provided during the course. ● Baldoni, R., Giardini, L., Coltivazioni Erbacee – Cereali Proteaginose. Patron Editore. 2000 ● Baldoni, R., Giardini, L., Coltivazioni Erbacee – Piante oleifere, da zucchero, da fibra, orticole e aromatiche. Patron Editore. 2000
Notes, additional materials	<ul style="list-style-type: none"> ● Scientific papers.
Repository	All teaching material will be available to students on web platforms.
Assessment	
Assessment methods	<p>The exam consists of an oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom and in practical activities (laboratory and educational visits).</p> <p>Students may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for one academic year (Art. 6 of the Didactic Regulations of the Bachelor Degree Course in Food Science and Technology). The result of the mid-term exam is communicated by publication in the student's electronic register and contributes to the assessment of the profit examination by means of calculation of the weighted average.</p> <p>The exam for foreign students may be conducted in English as described above.</p>
Assessment criteria	<ul style="list-style-type: none"> ● Knowledge and understanding: <ul style="list-style-type: none"> ○ Describing the relationships between agronomic and cultural problems and the quality of processed crop products

	<ul style="list-style-type: none"> ○ Understanding and highlighting the relationships between agronomic and cultural problems and the quality of processed crop products ● Applying knowledge and understanding: <ul style="list-style-type: none"> ○ Applying the knowledge of the relationships between agronomic and cultural problems and the quality of processed plant products acquired during the course in different contexts. ● Autonomy of judgment: <ul style="list-style-type: none"> ○ Managing the critical analysis of the technical-cultural itineraries of the main crops for food and condiment use destined for fresh consumption or for processing. ○ Developing and applying the technical-cultural itineraries of the main crops for food and condiment use destined for fresh consumption or for processing. ○ Expressing reasonable hypotheses about the technical-cultural itineraries of the main crops for food and condiment use destined for fresh consumption or for processing. ● Communicating knowledge and understanding: <ul style="list-style-type: none"> ○ Acquiring communication skills and tools to analyse and discuss the knowledge of the relationships between agronomic and cultural problems and the quality of processed plant product with interlocutors with similar and different backgrounds. ● Communication skills: <ul style="list-style-type: none"> ○ Communicating the theoretical acquired concepts using the appropriate scientific and technical language. ● Capacities to continue learning: <ul style="list-style-type: none"> ○ Considering the capacity to deepen and update the knowledge within the topics of the course also through efficient bibliographic research using the database scopus and google scholar.
Final exam and grading criteria	<p>The assessment of the student's preparation is based on predetermined criteria in accordance with the Didactic Regulations of the Bachelor's Degree Course in Food Science and Technology (art. 9).</p> <p>The Examination Committee has a score ranging from a minimum of 18 to a maximum of 30 points for a positive assessment of the student's performance. By unanimous vote of its members, the Board may award honours in cases where the final mark is 30.</p>
Further information	