

COURSE OF STUDY Master degree in Plant Medicine (LM69)

ACADEMIC YEAR 2023-2024

ACADEMIC SUBJECT Advanced vegetable crops (Module of Plant productions – 9 ETCS)

| General information | |
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| Year of the course | First |
| Academic calendar (starting and ending date) | I semester (September 25, 2023 – January 19, 2024) |
| Credits (CFU/ETCS): | 3 |
| SSD | Vegetable and floriculture – AGR/04 |
| Language | Italian (English will be used when required for foreign students into didactic material) |
| Mode of attendance | Not mandatory |

| Professor/ Lecturer | |
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| Name and Surname | Pietro Santamaria |
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| Telephone | 080-5443098 |
| Department and address | Scienze del Suolo, della Pianta e degli Alimenti |
| Virtual room | M. Teams |
| Office Hours (and modalities: e.g., by appointment, on line, etc.) | Every day by email and appointment |

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

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| Learning Objectives | The course aims to provide in-depth knowledge about: propagation techniques and the cultivation of vegetables, with particular regard to systems and techniques capable of optimizing: agrobiodiversity, propagation, and production according to the biology and physiology of species, agro-environmental characteristics, quality standards of the product in relation to the commercial destination. |
| Course prerequisites | “Agronomy” and “Vegetable crops” requests for admission to the Master course. |

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| Teaching strategie | The topics of the course will be treated with the help of Power Point presentations and with the support of videos. Students will receive the pdf format of the frontal lesson with the addition of useful texts for their study to the images. Each lesson (ppt and pdf) will be enriched with curiosities, links, insights, exercises to be carried out and questions for self-verification. Laboratory activities, technical visits in the field and in leading companies will be carried out. |
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| Expected learning outcomes in terms of | |
| Knowledge and understanding on: | Knowledge of design and sustainable management of integrated production of crops and vegetable products to improve the qualitative, quantitative and sanitary aspects of production, post-harvest and marketing. |
| Applying knowledge and understanding on: | Ability in innovative design and management of integrated crop production (ICM) and vegetable products to improve the qualitative, quantitative and sanitary aspects of vegetable yield, post-harvest and marketing. |
| Soft skills | <ul style="list-style-type: none"> • Making informed judgments and choices <ul style="list-style-type: none"> • Ability to analyze the different situations of a production and market environment, to plan and to manage actions to improve the quality and efficiency of vegetable production, also in terms of sustainability and eco-compatibility. • The acquisition of judgment autonomy is verified by evaluation of the teaching. • Communicating knowledge and understanding <ul style="list-style-type: none"> • Personal skills aimed at communication, multidisciplinary group work and judgmental skills both at the technical and the human and ethical levels. • Capacities to continue learning <ul style="list-style-type: none"> • Expected learning outcomes, as knowledge and ability, are reported in the annex A of the Didactic Regulation of the course Plant Medicine (expressed by European Descriptors). |
| Syllabus | |
| Content knowledge | <ul style="list-style-type: none"> • Vegetable agrobiodiversity and Apulian local varieties, artichoke, cauliflower, broccoli, raabs, lettuce and leafy vegetables, tomato for the fresh market, and early potato (2.5 ECTS; 16 h lectures + 7 h Lab & field cl.). • Visits to production and/or experimental farms (0.5 ECT; 7 h). |
| Texts and readings | Pardossi A., Gianquinto Prosdocimi G., Santamaria P., Incrocci L., <i>Orticoltura. Principi e pratica</i> (eds). Edagricole - New Business Media, Milano, 2018. |
| Notes, additional materials | Lecture notes provided by the teacher. Technical reports and scientific articles. |
| Repository | M. Teams |
| Assessment | |
| Assessment methods | <p>Oral.</p> <p>The evaluation of the student's preparation takes place on the basis of pre-established criteria, as detailed in the Didactic Regulations of the Master's Degree Course.</p> <p>In assigning the final grade, the theoretical and practical knowledge acquired, the ability to apply the aforementioned knowledge, the autonomy of judgment, the communication skills and the ability to integrate the knowledge acquired, the knowledge of one's own territory will be taken into account.</p> |
| Assessment criteria | <ul style="list-style-type: none"> • <i>Knowledge and understanding</i> <ul style="list-style-type: none"> ○ Knowing how to design and manage the integrated production of vegetable crops and products in a sustainable way in order to improve the qualitative, quantitative and sanitary aspects of production, shelf life and marketing. • <i>Applying knowledge and understanding</i> <ul style="list-style-type: none"> ○ Being able to apply the main process and product innovations in the integrated production of crops (ICM) and vegetables to improve the |

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| | <p>qualitative, quantitative and sanitary aspects of the productions, shelf life and marketing.</p> <ul style="list-style-type: none"> • <i>Autonomy of judgment</i> <ul style="list-style-type: none"> ○ Being able to critically evaluate the different situations of a production and market context, to plan actions and manage interventions to improve the quality and efficiency of vegetables, also in terms of sustainability and eco-compatibility. ○ Self-producing microgreens. ○ Conduct the crop cycle of the vegetable crops studied. • <i>Communicating knowledge and understanding</i> <ul style="list-style-type: none"> ○ Assessment of personal skills, aimed at communication, multidisciplinary teamwork and judgment skills, both on a technical and human and ethical level, even during the course of teaching and in relation to the interactivity developed. • <i>Communication skills</i> <ul style="list-style-type: none"> ○ Personal skills aimed at communication, multidisciplinary group work and judgmental skills both at the technical and the human and ethical levels. • <i>Capacities to continue learning</i> <ul style="list-style-type: none"> ○ The expected learning outcomes, in terms of knowledge and skills, are shown in Annex A of the Degree Program Didactic Regulations (expressed through the European Descriptors of the qualification). |
| Final exam and grading criteria | <p>For students enrolled in the year in which the teaching is done, there will be a midterm exam as oral test. The evaluation of the students' tests takes place on the basis of pre-established criteria which include:</p> <ol style="list-style-type: none"> a) consistency with the topics of the program, b) the quality of the processing, c) the ability to analyze, d) the level of structure of the arguments. <p>The evaluation of the intermediate / final exam is expressed in thirties and the exam is passed when the grade is greater than or equal to 18. The final mark will consider the theoretical and practical knowledge acquired the ability to apply the knowledge, autonomy of judgment, communication skills and on the ability to integrate the acquired knowledge in a project work. The evaluation of the student is based on criteria previously fixed such as reported in the Annex A of the Didactic Regulation of the Master Course in Plant Medicine</p> |
| Further information | |
| | <p>Students will be invited to participate in research activities conducted in relation to research projects on the biodiversity of vegetable crops in Puglia and on soilless crops.</p> <p>Tutoring could be also on e-learning platforms.</p> |