UNIVERSITÀ
degli STUDI
di CATANIA

Regulations of the Master's Degree Program in
AGRICULTURAL SCIENCE AND TECHNOLOGY (LM-69R)
(CLASS LM-69R - Agricultural sciences and technologies)
COHORT 2025-2026
approved by the Academic Senate in the session of 22 July 2025
CONTENTS

ART. 1 – GENERAL INFORMATION
1.1 Department: Department of Agriculture, Food and Environment (Di3A)
1.2 Degree class: LM-69R – Agricultural Sciences and Technologies
1.3 Teaching location: Catania, Via S. Sofia 100
1.4 Governing bodies of the Degree Program 'Agricultural Sciences and Technology': President, Degree Program Council, Quality Assurance Management Group.
1.5 Professional profiles of reference: Agronomist The program prepares for the following professions (ISTAT codes): 1. Agronomists and Foresters – (2.3.1.3.0) 2. Management Specialists in Public Administration – (2.5.1.1.1) 3. Specialists in the Marketing of Goods and Services (excluding the ICT sector) – (2.5.1.5.2) 4. Researchers and Graduate Technicians in Agricultural, Zootechnical, and Animal Production Sciences – (2.6.2.2.2)
1.6 Access to the program: open
1.7 Language of instruction: English
1.8 Duration of the program: two years
1.9 Award of the degree: The Master's degree is awarded upon acquisition of at least 120 ECTS (98 ECTS coursework + 22 ECTS final examination).
1.10 Teaching regulations: The curriculum of the Degree Program with the general framework of the training activities, drafted according to the scheme defined by the Ministerial Decrees and in compliance with ANVUR requirements, can be consulted at the link reported in Art. 5 of this Regulation.

ART. 2 – ADMISSION REQUIREMENTS AND CREDIT RECOGNITION

2.1 Qualification

To be admitted to the Master's Degree LM-69R, applicants must hold a three-year university degree or university diploma, or another qualification obtained abroad recognized as suitable by the Degree Program Council. It is also necessary to possess specific curricular requirements as well as adequate personal preparation. The required curricular and personal preparation requirements and the methods for verifying them are reported in the curriculum and in the following points 2.3 and 2.4 of this academic regulation.

2.2 Non-EU candidates residing abroad with foreign qualifications

Non-EU candidates must hold an academic qualification obtained abroad, recognized as suitable under current legislation. For foreign students, reference should be made to the notice regarding the "Public Selection for the admission of non-EU students residing abroad", available at the University website. In addition, candidates with foreign qualifications may make use of the services of the University of Catania dedicated to international students.

2.3 Curricular requirements

The curricular requirements for admission are automatically met by graduates in class L-25 (Sciences and Technologies for Agriculture) and graduates in Agricultural Sciences and Technologies in class 20 of the previous system, or an equivalent title obtained abroad. These requirements are also met by graduates in classes L-2 (Biotechnology), L-13 (Biological Sciences), L-21 (Planning and Environmental Sustainability Sciences of the Territory and Landscape), L-26 (Food Science and Technology), L-27 (Chemical Sciences and Technologies), L-29 (Pharmaceutical Sciences and Technologies), L-32 (Environmental and Nature Sciences and Technologies), L-38 (Zootechnical Sciences and Animal Production Technologies) and corresponding classes of D.M. 509/1999 or an equivalent foreign title, provided they have acquired at least 60 ECTS in one or more of the scientific-disciplinary sectors AGRI (ex AGR), MATH (ex MAT), INFO (ex INF), IINF (ex ING-INF), ECON (ex SECS-P), CEAR (ex ICAR), PHYS (ex FIS), BIOS (ex BIO), MVET (ex VET) and CHEM (ex CHIM).

For admission to the program, adequate knowledge of the English language at least at level B2 of the Common European Framework of Reference for Languages (CEFR) is required. Admission to the Master's degree program is subject to passing a test of the adequacy of personal preparation which will be carried out according to the methods defined in the Academic Regulation of the degree program. For more detailed provisions, including the deadlines by which the curricular requirements must be obtained, refer to the University's notice for access to Bachelor's and Master's degree programs with open enrollment, available on the University website.

2.4 Admission tests and methods for verifying the adequacy of preparation

Access to the program also requires knowledge of the Italian language equivalent to at least level B2 of the CEFR. Foreign students who do not possess this requirement must include in their study plan educational activities aimed at achieving the required level.

Admission for the academic year 2025-2026 is open (non-limited number of places). The adequacy of the applicant's initial preparation will be verified by means of an oral interview before a Commission appointed by Di3A. The interview will cover the topics included in a Syllabus published online on the Degree Program's website, as well as the applicant's motivations, ability to summarize, mastery of the subjects covered and communication skills.

2.5 Criteria for recognition of credits obtained in other degree programs

Based on Art. 12 of the University Didactic Regulations, the total or partial recognition, for the purposes of continuing studies, of credits acquired by a student at other Universities or in other Degree Programs, is deliberated by the Degree Program Council which admits the student, following procedures and criteria that ensure recognition of the maximum number of credits already gained by the student, possibly resorting to interviews to verify the knowledge actually possessed. Non-recognition of credits must be suitably justified. If the student comes from a Master's degree program belonging to the same class, the quota of credits relating to the same scientific-disciplinary sector directly recognized to the student cannot be less than 50% of those already acquired. Consistently with the University Didactic Regulations, a student who has obtained credits that can be recognized may apply for enrollment with shortened study duration; the Degree Program Council deliberates the ECTS to be recognized and, consequently, the year in which the student can be enrolled.

2.6 Criteria for recognition of certified professional knowledge and skills, as well as other knowledge and skills acquired in post-secondary training activities:
Pursuant to current legislation and in line with the University Didactic Regulations, professional knowledge and skills, as well as other knowledge and skills acquired in post-secondary training activities, certified in accordance with the law, may be recognized as university credits. Specifically, if the activity has been carried out at a public administration, it is sufficient for the student to present a self-certification pursuant to current legislation; if the activity has been carried out at an entity or structure not belonging to the public administration, the student must present a certification issued in accordance with the law by the entity and/or structure where the activity was performed. Such certifications must also report the number of hours of the training activity carried out, the evaluation of learning and the skills acquired as a result of the certified activity. For the recognition of ECTS, the competent bodies of the Degree Program identify which knowledge and skills may be recognized, up to the maximum number of ECTS indicated in point 2.9, based on criteria that allow an accurate assessment primarily to verify relevance and adequacy with the curriculum and the specific educational objectives of the Degree Program. Activities already recognized for the attribution of university credits within Bachelor's degree programs may not be recognized again as credits within Master's degree programs, single-cycle Master's degree programs, or other degree programs.
2.7 Criteria for recognition of ECTS for training activities carried out in cycles of study at public administration training institutes, and other knowledge and skills acquired in post-secondary training activities in which the university participated
Pursuant to current legislation and in line with the University Didactic Regulations, ECTS may be recognized for training activities carried out in study cycles at public administration training institutes, as well as for other knowledge and skills acquired in post-secondary training activities in the design and implementation of which the University has participated. As with point 2.6, the recognition request must be accompanied by appropriate certification in accordance with the law and providing suitable information for evaluation. For the recognition of ECTS, the competent bodies of the Degree Program identify which activities, knowledge and skills can be recognized, up to the maximum number of ECTS indicated in point 2.9, based on criteria aimed at allowing an accurate assessment to primarily verify relevance and adequacy with the curriculum and the specific educational objectives of the Degree Program. Activities already recognized as university credits in Bachelor's degree programs may not be recognized again as credits for Master's degree programs or other degree programs.
2.8 Criteria for recognition of ECTS for students who have won an Olympic or Paralympic medal or the title of absolute world champion, absolute European champion or absolute Italian champion in disciplines recognized by the Italian National Olympic Committee or the Italian Paralympic Committee.
Not provided
2.9 Maximum number of credits that can be recognized for the reasons indicated in points 2.6, 2.7 and 2.8:
12 ECTS

ART. 3 – ORGANIZATION OF TEACHING

3.1 Structure of the educational path

The educational path is articulated into 4 curricula and includes both core and integrative subjects, typically mono-disciplinary or, in some cases, integrated. A set of courses is common to all pathways. The number of examinations in each curriculum is a maximum of 11, including elective credits. Each course includes lectures and supplementary teaching activities (exercises, seminars, field visits, etc.). Training activities are organized by semester. Common courses are concentrated in the first year, occupying the entire first semester and part of the second semester, and aim to complete the preparation of the first-cycle graduate by providing additional information in the fields of agricultural engineering and economic-management aspects, plant and animal production, and plant protection. The second year, in particular, includes the activities specific to each curriculum; the second semester is almost entirely devoted to preparation of the final dissertation. To increase practical skills and contact with the world of work, internships are foreseen to be carried out starting from the first year.

The four curricula are:

1. CURRICULUM “Plant productions”
2. CURRICULUM “Plant protection technologies”
3. CURRICULUM “Economy and planning”
4. CURRICULUM “Zootechnical”

3.2 Temporal division:

semester-based

3.3 Dual Degree pathway:

Not available

3.4 Attendance

Attendance to courses is not compulsory, however it is strongly recommended as it facilitates learning and merit evaluation. It is possible to recognize the status of part-time working student, student-athlete, student in a situation of vulnerability, student with disabilities, and students in detention, upon submission of a request, in compliance with Art. 30 of the University Didactic Regulations and the Regulation for the recognition of the status of working student, athlete, student in difficulty and student with disability (D.R. n. 1598 of 2/5/2018) and the Department Council resolution Di3A n. 3 of 20 January 2016. Such students will be granted specific forms of supplementary teaching support and the possibility to sit examinations in extraordinary sessions.

3.5 Methods for recording attendance

Attendance is not mandatory but strongly recommended. Recording attendance of "active" students, i.e., those who participate in lessons and are required to fill in the OPIS periodic teaching evaluation questionnaire, according to ANVUR rules, will be carried out by methods entrusted to the organizational autonomy of the course lecturers. It is the responsibility of the lecturer to communicate such information on the teaching activity carried out to the relevant University offices, also by means of the lecturer opinion reporting form provided by the University.

3.6 Types of teaching adopted:

Courses may include multiple modules, each referable to a different type of activity, corresponding to a different fraction of the total workload to be assigned to teacher-led activities as follows:

(F) Lecture = 7 hours of classroom lectures per ECTS;

(E) Other activities (exercises) = 14 hours of assisted work in the classroom, laboratory, seminars, field trips per ECTS.

3.7 Methods of verification of preparation:

Verification of preparation varies with the course. Assessment can be carried out by:

- oral exam (O);
- written exam (S);
- drafting a technical report (T);
- graphic test (G);
- practical test (P);
- intermediate oral and/or written test (PI).

The type of test, both intermediate and final, is chosen in order to allow the commission to assess most appropriately the achievement by the student of the expected learning outcomes.

3.8 Rules for submitting individual study plans:
Pursuant to Art. 13 paragraph 10 of the University Didactic Regulations, students may obtain the degree according to an individual study plan that may include educational activities different from those provided by the regulation, provided they are consistent with the curriculum of the degree program in the academic year of enrollment. In the case of credit recognition pursuant to points 2.6, 2.7 and 2.8, and for students coming from other degree programs, the Degree Program Council draws up an individual study plan that guarantees the same educational contents as the official study plan. Similar initiatives will be evaluated by the Degree Program Council for the training paths of "part-time students", "working students", "student-athletes" and "students in conditions of vulnerability, with disabilities and in detention". Regarding part-time students, Art. 29 of the University Didactic Regulations applies.

3.9 Criteria for periodic verification of non-obsolescence of knowledge contents
No specific criteria for periodic verification of the non-obsolescence of teaching contents are provided for courses related to Ministerial Decrees D.M. 509/99 and D.M. 270/04, as decided by the Department Council of Agriculture, Food and Environment (Di3A) in the meeting of 20 January 2016.

3.10 Criteria for verification of credits earned more than six years ago
Credits earned more than six years ago are considered fully valid if there have been no substantial changes in the content of the courses to which they refer. Otherwise, the Degree Program Council shall decide in accordance with the provisions of the Di3A Department Council resolution of 20 January 2016.

3.11 Criteria for recognition of studies carried out abroad
A student may carry out part of his/her studies at foreign universities or equivalent institutions with which the University has implemented student mobility programs recognized by European universities and/or bilateral agreements that provide for the awarding of degrees recognized by both parties. Pursuant to Art. 32 of the University Didactic Regulations, the Degree Program Council deliberates on the Learning Agreement presented by the student, specifying which teaching activities are recognized and adequately motivating any activity that cannot be recognized. The deliberation indicates the correspondence between the recognized teaching activities and those of the degree program and is not based on a perfect correspondence of contents, but verifies that they are coherent with the degree class objectives. Assessment is carried out in thirtieths and conversion complies with the ECTS system.

3.12 Criteria for recognition of credits earned at other Italian universities:
Based on agreements for mobility programs with other legally recognized Italian Universities, and according to University provisions, it will be possible to recognize ECTS as foreseen by those agreements and by the annual call.

3.13 Orientation and tutoring
Incoming orientation by Di3A is considered strategic by all members of the Degree Program Council, as it supports students in the training path and is essential to academic success of enrolled students and to correct potential critical issues in the external perception of the Degree Program. At Department level, orientation activities are managed by the Di3A Orientation Committee, which coordinates promotion activities of the Degree Program through University initiatives and other actions. The Department web page provides information and updates on ongoing initiatives.
Students enrolled in the Master's Degree in Agricultural Sciences and Technologies are closely followed by the teaching staff thanks to the favorable teacher/student ratio. At the beginning of each academic year the President of the Degree Program organizes a welcome meeting for first-year students to present the Degree Program, main services and opportunities offered, such as the possibility of carrying out part of the training abroad through the Erasmus program.
The Degree Program provides for a tutor role carried out by several lecturers of the Degree Program Council; tutors are coordinated by the President of the Degree Program and work in concert with the Quality Assurance Management Group (GGAQ) and the Department Joint Committee. Students are assigned tutors when the list of first-year students is available and assignments are made to equitably distribute students among tutors. Students can view the assignment on the Degree Program web page.
Tutoring aims to provide clear points of reference during the study path. Different types of tutoring are provided:
1) Informative:
- reception, organizational-didactic support (e.g., study plan guidance at the end of the first year to support curriculum choice);
- support in interacting with lecturers;

- general and advisory information support via in-person contacts, phone, e-mail;
2) Didactic:
- supplementary and remedial teaching in critical disciplinary areas;
- laboratory support to guide students in applying the scientific method to interpret experimental observations.

Didactic tutoring is aimed especially at remediating delayed careers and supporting working students or students in difficulty. Students are also encouraged to use the University's psychological counseling services, aimed at helping students face and overcome personal, relational and study difficulties such as exam anxiety, stress, panic attacks or inadequate communication styles. Improving problem-solving awareness helps students re-engage in university life.

3.14 Evaluation of teaching activity:

Students' opinions on teaching activities are collected annually via the OPIS questionnaire, administered according to procedures defined by the University's Quality Assurance. The surveys are anonymous; results are available on the University portal and are analyzed by the Degree Program's Quality Assurance Group to propose corrective actions for any identified issues. Lecturers promote awareness among students regarding the importance of participating in OPIS evaluations.

3.15 - Internships (curricular) and placement:

No internship is mandatory. Career support is provided at Department level by the Di3A Placement Committee with the aim of supporting young graduates in their professional paths, helping them in choosing and actively searching for work. Refer to the Department web page for details and updates on planned initiatives.

ART. 4 – OTHER TRAINING ACTIVITIES

4.1 Student elective activities:

Students may freely choose 12 ECTS among the teaching activities offered at the University, provided that these are judged by the Degree Program Council to be coherent with the training project and not overlapping with courses already present in the study plan. The Degree Program Council evaluates individual requests. The student's choices may include courses from a list of annually pre-approved subjects, using the University career management system. To acquire such credits, passing the exam or another form of assessment is required.

4.2 Additional training activities (Art. 10, paragraph 5, letters c, d of DM 270/2004)

a) Further language skills: not provided
b) IT and telematics skills: not provided
c) Training and orientation internships: not provided
d) Other knowledge useful for employment: total 1 ECTS.

Students may request recognition of participation in departmental employment-orientation seminars or present certifications for formative and cultural activities, carried out with or without University involvement. Such activities must relate to a period within years of enrollment and be judged coherent by the Degree Program Council with the degree class objectives. After obtaining certification for activities totaling 1 ECTS, the student may request recognition during their career by submitting a short written report on the activities. The Student Services office will then schedule the student for approval of credits by a Commission appointed by the Degree Program Council.

4.3 Periods of study abroad and/or in Italy:

Training activities followed abroad are taken into account by the Commission during evaluation of the final examination, as specified at point 4.4.

4.4 Final examination

The final examination, corresponding to 22 ECTS, consists of the drafting (in English) and public discussion, before a Commission, of an original experimental thesis prepared by the candidate under the supervision of one or more supervisors, at least one of whom must be a university lecturer, possibly also from another University. The total ECTS of the final examination may derive from one of the following alternatives:

a) Data acquisition entirely carried out abroad: 18 ECTS; thesis writing: 4 ECTS;
b) Data acquisition entirely carried out in Italy: 18 ECTS; thesis writing: 4 ECTS.

The thesis discussion is public and takes place before a Commission composed of no fewer than 5 and no more than 11 University lecturers, including adjunct professors, and chaired by the President of the Degree Program or a delegated lecturer. The supervisor, if not a member of the Commission, participates in the evaluation only for the candidate whose work he/she supervised. The Master's thesis can be written in Italian or English; if written in Italian, it must contain an abstract in English; if written in English, it must contain an extended summary in Italian. The registration of the final examination is carried out electronically with the signature of the president and secretary of the Commission. For what is not specified, reference is made to Art. 25 of the University Didactic Regulations. The evaluation of the final examination for degree awarding is expressed in one hundred and tenths (110). The final grade, in addition to the assessment of the thesis, takes into account all student assessments achieved in the program and any other relevant elements, in particular cultural maturity and the capacity for personal intellectual elaboration and any international experiences. Thesis merit is awarded by the Commission considering exposition and mastery of the subject. The Commission may award a score from 0 to 8 points based on the coherence between educational objectives and professional objectives, cultural maturity and the capacity for personal intellectual elaboration.

Overall curricular merit is calculated by adding to the weighted average of grades of the study record, expressed in one hundred and tenths [(weighted average of grades × 11) / 3]:

- 0.2 points for each single laude (honor);
- 2.0 points for a number of ECTS acquired abroad ≥ 12;
- 0.1 points for each ECTS gained during a period of study abroad and not already recognized;
- 1.0 point if the student is on time with their degree (in corso).

With regard to the last criterion, for students with Specific Learning Disorders (DSA) the normal duration of the course is increased by 1 year and for students with disabilities it is increased by 2 years. The candidate who obtains the maximum possible grade may be awarded honors only unanimously by the Commission. For matters not specified, reference is made to Art. 25 of the current University Didactic Regulations.

ART. 5 – TEACHING REGULATIONS
Approved on 29/03/2024
Link to the Degree Program's didactic regulations (RaD) for LM-69R:
https://www.di3a.unict.it/sites/default/files/documenti_sito/LM69_eng_RAD_2025.pdf

ART. 6 – PLANNED TEACHING (SUA-CdS)

LIST OF COURSES

Cohort 2025–2026

n.	SSD	Course title	ECTS	No. hours		Prerequisites	Learning Objectives
				Lessons	Other Activities (exercises)		
1	C.I.	**APPLIED ANIMAL PRODUCTION**					The course aims to enhance understanding of the impact of corporate-level strategies on improving the sustainability of livestock farming and product quality. This will be achieved by integrating an overall view of various production systems with the use of objective measurement and evaluation tools.
	AGR/19 AGRI-09/C	Evaluation tools for quality management in livestock	6	21	42	-	The course aims to provide knowledge useful for assessing the effects of sustainable livestock production systems on the quality of animal-derived foods. Topics related to the objective evaluation and determination of the main parameters defining the quality of animal-derived foods and the possible factors causing variations will be addressed. Additionally, criteria for obtaining, evaluating, and presenting relevant objective data will be discussed. By the end of the course, students will be able to evaluate the impact of sustainable livestock systems on the quality of animal-derived products by identifying the parameters of quality most influenced. Furthermore, students will be capable of objectively measuring some of these parameters and critically interpreting and presenting relevant data.
	AGR/19 AGRI-09/C	Sustainable management of animal production system	6	21	42	-	The aim of the course is to deepen students' understanding of animal husbandry techniques aimed at ensuring the sustainability and quality of production. By the end of the course, students will be able to develop sustainable grazing management for ruminant species by selecting appropriate stocking rates based on adopted grazing techniques, as well as outdoor pig farming. Additionally, they will be able to assess the use of by-products from the agri-food industry in animal feed or other alternative food resources through analytical characterization and determine their effects on product quality. Students will also be able to critically evaluate organic animal production systems and their effects on animal product quality compared to "conventional" production techniques. Furthermore, they will be able to critically assess husbandry factors that can have a significant impact on the environment in terms of greenhouse gas emissions and develop possible husbandry strategies to mitigate this impact.

2	AGR/03 *AGRI-03/AA*	Fruitculture	6	21	42	-	The course aims to provide knowledge on the cultivation of the main fruit tree species, especially those found in the Mediterranean environment. It delves into aspects related to crop framing, variety and rootstock selection, agronomic management of orchards, and cultivation techniques aimed at sustainable and quality production. By the end of the course, students will be able to address key agronomic decisions related to fruit tree cultivation in the Mediterranean environment and design environmentally and economically sustainable fruit orchards.
3	C.I.	**ARTHROPOD PEST MANAGEMENT IN MEDITERRANEAN CROPS**					The course aims to increase the knowledge on the ecological and phytosanitary importance of key arthropod plant pests and on their integrated and biocontrol strategies.
	AGR/11 *AGRI-05/A*	Biological control	6	21	42	-	Aim of the course is to provide general knowledge on multitrophic interactions among plants, arthropod pests and their biocontrol agents in natural and agricultural ecosystems. Moreover, specific information on biology and rearing methods of natural enemies as well as on biocontrol field strategies are provided. Students will be able to recognize and exploit the main control agents of arthropod pests in Mediterranean crops; also, they will acquire theoretical and practical skills on field application of biological pest control strategies in Mediterranean crops.
	AGR/11 *AGRI-05/A*	Integrated pest management	6	21	42	-	The course aims at providing advanced knowledge on the ecological role and harmfulness of key insect pests of the major Mediterranean crops. The main sustainable integrated management strategies specific for each key insect pest of the Mediterranean environment are alsoprovided. Students will thus be able to recognize the key insect pest and their damage, as well as to develop specific integrated and sustainable control strategies against them.
4	AGR/03 *AGRI-03/A*	Mediterranean fruit tree crops	6	21	42	-	The course aims to provide students with in-depth knowledge of the interrelationships among biological, environmental, and technical-cultural factors involved in citrus, grape, and olive production. Specifically, students will be expected to address and resolve all issues related to variety selection and cultivation techniques, adopting the most appropriate ones according to specific needs. By the end of the course, students will be able to make autonomous agronomic decisions and assist stakeholders in the citrus, olive, and grape production sectors in making suitable pre-planting and management choices for sustainable and high-quality productions in the Mediterranean environment.

5	AGR/04 *AGRI-02/B*	Vegetable and ornamental crops	6	21	42	-	The course aims to provide a comprehensive understanding of the cultivation of the most representative species in Italian horticulture and floriculture. Its objective is to offer suitable preparation for organizing and managing the production process to achieve appropriate yields, product quality, and environmental sustainability. By the end of the course, students will be able to organize the production process of both vegetable and floral crops, taking into consideration their qualitative aspects and the sustainability of the production process itself.
6	AGR/12 *AGRI-05/B*	Diagnosis in plant pathology	6	21	42	-	The course aims to provide knowledge on traditional and innovative methods for the diagnosis and characterization of the main plant disease agents. Students will learn various phytopathological diagnostic techniques (isolation, biological assay, serological and molecular methods for diagnosis, characterization, and identification of plant pathogens) as well as their use in diagnostic protocols required by regulations and legislation concerning quarantine pathogens and quality. Students will develop skills in selecting the most suitable diagnostic method for the rapid and accurate interception of pathogens in order to better guide prevention and control methods.
7	C.I.	**REAL ESTATE VALUATION AND COMMON AGRICULTURAL POLICIES**					The integrated course aims to provide principles, models, and methodological and applicative tools for determining the value of goods with and without a market, as well as to present common agricultural and fisheries policies, considering their objectives, tools, and operational methods
	AGR/01 AGRI-01/A	Rural estate	6	21	42	-	Through applications related to various notable cases, operational schemes are provided for estimating the value of rural properties even in the presence of legal limitations on property rights, methods of investigation and analysis of the real estate market, guidelines for drafting real estate due diligence, and tools for professional practice in credit concessions, damage assessment, green areas, and ornamental plants. The aim is to impart the necessary skills for developing an objective appraisal judgment, in accordance with international appraisal standards, articulated, transparent, and corresponding to the practical reasoning of the appraisal and justice requirements.

	AGR/01 AGRI-01/A	European Agricultural and Fisheries Policy	6	21	42	-	The course aims to present the European policies on agriculture and fisheries, considering their objectives, instruments, and functioning. It seeks to develop an understanding of their evolution and current reform, with reference to market regulation and the development of coastal and rural areas. The course also enables the development of key tools for financing agri-food businesses through specific exercises. By the end of the course, students will be able to engage in business consulting activities and project design using European funds.

8	AGR/12 AGRI-05/B	Plant disease management	6	21	42	-	The course aims to provide an in-depth understanding of crop protection in horticulture, floriculture, and fruit growing. It aims to train professionals capable of identifying and recommending the most suitable defense strategies to contain major disease agents. Additionally, the course will provide criteria for continuous professional updating in crop protection. By the end of the course, students will be able to consult specialized literature, use websites relevant to plant pathology, and develop effective eco-sustainable strategies against major plant disease agents.
9	C.I.	**STRATEGIC MANAGEMENT OF AGRICULTURAL FIRMS, MARKETS AND MARKETING**					Essential tools are provided for defining the strategic and competitive orientation of the enterprise, as well as for analyzing and interpreting the structure and management of the agricultural enterprise. Additionally, fundamental instruments are offered for understanding the market of agri-food products and its trends
	AGR/01 AGRI-01/A	Strategic management of the farm	6	21	42	-	Essential tools are provided for defining the strategic and competitive orientation of the enterprise and for analyzing and interpreting the structure and management of the agricultural enterprise, methods for planning entrepreneurial choices, and investment programming in agriculture, both short and long term. At the end of the course, students will be able to develop prospective and actual economic balances, as well as a business plan for accessing venture capital.
	AGR/01 AGRI-01/A	Agri-Food markets and marketing	6	21	42	-	The course aims to provide students with the basic tools necessary to understand the market for agri-food products and its trends within developed economic systems, as well as to provide the methodological foundations and skills needed to analyze development strategies and marketing models in the competitive market. By the end of the course, students will be able to develop a marketing plan for accessing investment measures in rural development plans.

10	C.I.	**SUSTAINABLE AGROECOSYSTEM**					Provide knowledge about the composition of soil organic matter, techniques to enhance it, and its functions, with a focus on rational soil management for conservation, fertility preservation, and improved yields through the management of agricultural production factors and technical means.
	AGR/13 AGRI-6/B	Management of soil organic matter	6	21	42	-	The module aims to provide in-depth knowledge of natural organic matter dynamics and nutrients to understand the factors regulating plant growth, particularly in light of new scenarios arising from climate change. By the end of the course, students will have a comprehensive understanding of organic matter and nutrient dynamics in agricultural soils, as well as the relationships between soil nutritional properties and vegetation. Additionally, students will gain insights into the potential use of treated or untreated organic waste matrices to enhance soil organic content.

	AGR/02 AGRI- 02/A	Sustainable management of cropping systems	6	21	42	-	Provide knowledge for the rational management of soil conservation, fertility maintenance, and improvement of crop yields, and acquire understanding for managing agricultural production factors and technical means regarding public health, plant health, animal welfare, and preservation of non-renewable resources to meet societal and market needs. By the end of the course, students will be able to develop and agronomically manage herbaceous cropping systems through sustainable farming techniques, focusing on soil organic matter management, fertilization plans, irrigation techniques, weed control, alternative fertilizer sources, and the use of biomass crops for bioenergy production. They will also be capable of applying simulation models for predicting crop development and yields.
11	AGR/08 AGRI-04/A	Water resource management in agriculture	6	21	42	-	Provide knowledge on soil hydrology in agricultural land and irrigation techniques, as well as on the criteria for designing and sizing irrigation systems. Students should acquire knowledge about the design, maintenance, and operation of irrigation systems, with particular reference to surface and subsurface microirrigation systems. Additionally, students will gain insights into the use of unconventional water resources in agriculture. Furthermore, students will develop specific skills in water- saving methods and techniques in agriculture, particularly focusing on deficit irrigation.
12	AGR/12 AGRI-05/B	Lotta biologica agli agenti fitopatogeni	6	21	42	-	The course aims to provide knowledge on biological defense of agricultural productions in pre- and post-harvest, essential for defining appropriate biological control programs. Special attention is given to the selection of antagonists, their modes of action, and their potential applications in major Mediterranean horticultural crops for the containment of significant pre- and post-harvest pathogens. By the end of the course, students will be able to plan and propose suitable biological control strategies for different horticultural contexts, both pre- and post-harvest.

13	AGR/09 *AGRI-04/B*	Agricultural mechanisation and labour organisation	7	21	56	-	The objective of the course is to provide students with the necessary elements to properly plan and evaluate the organization of work carried out by machinery construction sites, as well as to proceed with the mechanization of agricultural enterprises, entire areas, or innovative crops for the territory by designing the corresponding machinery fleet in relation to business objectives, agronomic constraints, and economic context. Therefore, environmental, technological, economic, and human factors that contribute to achieving the objectives are taken into consideration and organized in relation to each other, while respecting natural and environmental resources and according to ergonomic and safety criteria for operators. Elements of group work organization and personal motivations are also included.

14	AGR/17 *AGRI-09/A*	Genetic improvement of livestock	6	21	42	-	The course aims to provide students with knowledge of genetic improvement in animal species for livestock production. Key concepts regarding the principles and techniques of selection in animal husbandry, the principles underlying biological diversity, and the reasons for applying molecular biology techniques will be presented to the students. By the end of the course, students will be able to apply some basic laboratory molecular biology techniques and grasp fundamental notions for computer-based management of genetic/genomic data. They will understand the issues/potential associated with managing livestock farms and evaluate the possibility of corrective interventions to enhance efficiency, also utilizing genomic tools. Lastly, students will possess the cultural elements and scientific language specific to genetics, genomics, and genetic improvement as applied to animal husbandry.
15	AGR/18 AGRI-09/B	Animal nutrition and feeding	6	21	42	-	Provide skills for formulating rations based on the nutritional value of livestock feed and the nutritional requirements of animals. By the end of the course, students will be able to formulate rations for both monogastric and polygastric livestock.
16	AGR/10 AGRI-04/C	Rural buildings design	6	21	42	-	Provide technical skills for the performance of professional activities related to design, management, measurements, accounting, static and fire certification, safety coordination, and testing of works related to rural constructions, both for new constructions and for renovation interventions on existing buildings.
17	AGR/04 *AGRI-02/B*	Protected cultivations	6	21	42	-	The course is aimed at training specialists capable to analyse problems and evaluate possible options to get production from crops produced under modified micro- climatic conditions. These specialists will be able to put into practice the skills acquired with the purpose of planning and managing out-of- season production processes through the use of appropriate protection and suitable production techniques. At the end of the course the student will be able to design and manage crops in a protected environment.

18	C.I.	**HERBACEOUS CROP SYSTEMS**					The aim is to acquire adequate knowledge of quality evaluation systems for crops of primary food interest and to study the principles of cultivation of annual and perennial herbaceous plants for livestock feeding, as well as species with potential interest for energy production.
	AGR/02 AGRI-02/A	Biomass crops for energy	6	21	42	-	Provide knowledge for the rational management of biomass crops for energy within agro-energy chains for the production of thermal-electric energy, biogas, bioethanol, and biodiesel. The course will also provide insights into topics necessary for the development of an agro-energy chain: Legislation, Biomass Sourcing, Logistics, Transformation Processes, Transformation Plant, End Use, Sustainability (Energy, Environmental, Economic, Social). At the end of the course, students will have acquired the necessary skills in agronomic techniques for the main dedicated biomass crops in the Mediterranean environment, and on the main bioconversion processes for the production of renewable energy and non-energy products from a circular economy perspective.
	AGR/02 AGRI-02/A	Weed management techniques and fertilisation	6	21	42	-	Provide in-depth knowledge on the role, functions, and uptake of nutrients in cultivated plants, as well as on the biology, ecology, role, and impact of weeds in agroecosystems. Develop skills in formulating fertilization plans and techniques, as well as in managing weed control methods, both physical, chemical, and integrated, in major Mediterranean crops.
19	AGR/11 *AGRI-05/A*	Sustainable pest control	6	21	42	-	The objective of the course is to offer a comprehensive understanding of multitrophic interactions among plants, arthropod pests, and their biocontrol agents in both natural and agricultural ecosystems. Additionally, the course provides detailed insights into the biology and rearing methods of natural enemies, as well as various biocontrol field strategies. Upon completion, students will be capable of identifying and utilizing the primary control agents of arthropod pests in Mediterranean crops. Furthermore, they will gain theoretical knowledge and practical expertise in implementing biological pest control strategies in Mediterranean crop fields.

20	AGR/09 *AGRI-04/B*	Tecnologie per l'innovazione e la sicurezza in agricoltura	6	21	42	-	Provide the basic knowledge necessary for proper management and supervision of work processes, also from an energy perspective. Give adequate emphasis to aspects related to personnel safety in the workplace. At the end of the course, the student will be able to assess some basic processes (such as renewable energy production systems, characteristics of electricity for its use in the agro-industrial sector, selection and sizing of pumps for agricultural use), prioritizing the technical-engineering approach. Furthermore, they will be able to identify the main sources of risk associated with work activities (exposure to noise, exposure to vibrations, risks related to the use of spraying machines) and evaluate them in accordance with current regulations.

AGRICULTURAL SCIENCE AND TECHNOLOGY

ART. 7 – OFFICIAL STUDY PLAN
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1. CURRICULUM "Plant productions"

n.	SSD	Course title	ECTS	teaching method	Assessment of knowledge	Attendance
1st year - 1st period						
1	*AGR/04 AGRI-02/B*	*Vegetable and ornamental crop*	*6*	*F+E*	*PI / O*	*no*
2	*AGR/12 AGRI-05/B*	*Plant disease management*	*6*	*F+E*	*O*	*no*
3	*C.I.*	*SUSTAINABLE AGROECOSYSTEM*				
	AGR/13 AGRI-06/B	*Management of soil organic matter*	*6*	*F+E*	*PI / O*	*no*
	AGR/02 AGRI-02/A	*Sustainable management of cropping systems*	*6*	*F+E*	*O*	*no*
4	*AGR/08 AGRI-04/A*	*Water resource management in agriculture*	*6*	*F+E*	*O+S*	*no*
1st year - 2nd period						
5	*AGR/03 AGRI-03/A*	*Fruitculture*	*6*	*F+E*	*O*	*no*
6	*C.I.*	*REAL ESTATE VALUATION AND COMMON AGRICULTURAL POLICIES*				
	AGR/01 AGRI-01/A	*Rural estate*	*6*	*F+E*	*O + T*	*no*
	AGR/01 AGRI-01/A	*European Agricultural and Fisheries Policy*	*6*	*F+E*	*O+S*	*no*
7	*AGR/09 AGRI-04/B*	*Agricultural mechanisation and labour organisation*	*7*	*F+E*	*O+S*	*no*
8	*AGR/11 AGRI-05/A*	*Sustainable pest control*	*6*	*F+E*	*PI / O*	*no*
2nd year - 1st period						
9	*AGR/03 AGRI-03/A*	*Mediterranean fruit tree crops*	*6*	*F+E*	*O*	*no*
10	*AGR/04 AGRI-02/B*	*Protected cultivation*	*6*	*F+E*	*O*	*no*
11	*C.I.*	*HERBACEOUS CROP SYSTEMS*				
	AGR/02 AGRI-02/A	*Biomass crops for energy*	*6*	*F+E*	*O + T*	*no*
	AGR/02 AGRI-02/A	*Weed management techniques and fertilisation*	*6*	*F+E*	*O*	*no*
2nd year - 2nd period						

12		*Optional subject*	*12*			

Further activities				
Other knowledge useful for job placement	*1*			

Final examination, by one of the following modalities:	*22*			
a) Final examination				
Data acquisition totally carried out in Italy	*18*			
Thesis writing	*4*			
b) Final examination				
Data acquisition totally carried out abroad	*18*			
Thesis writing	*4*			

ART. 7 – OFFICIAL STUDY PLAN
Cohort 2025–2026

2. CURRICULUM "Plant protection technologies"

n.	SSD	Course title	ECTS	teaching method	Assessment of knowledge	Attendance
1st year - 1st period						
1	*AGR/04 AGRI-02/B*	*Vegetable and ornamental crop*	*6*	*F+E*	*PI / O*	*no*
2	*AGR/12 AGRI-05/B*	*Plant disease management*	*6*	*F+E*	*O*	*no*
3	*C.I.*	*SUSTAINABLE AGROECOSYSTEM*				
	AGR/13 AGRI-06/B	*Management of soil organic matter*	*6*	*F+E*	*PI / O*	*no*
	AGR/02 AGRI-02/A	*Sustainable management of cropping systems*	*6*	*F+E*	*O*	*no*
4	*AGR/08 AGRI-04/A*	*Water resource management in agriculture*	*6*	*F+E*	*O+ S*	*no*
1st year - 2nd period						
5	*AGR/03 AGRI-03/A*	*Fruitculture*	*6*	*F+E*	*O*	*no*
6	*C.I.*	*REAL ESTATE VALUATION AND COMMON AGRICULTURAL POLICIES*				
	AGR/01 AGRI-01/A	*Rural estate*	*6*	*F+E*	*O + T*	*no*
	AGR/01 AGRI-01/A	*European Agricultural and Fisheries Policy*	*6*	*F+E*	*O +S*	*no*
7	*AGR/09 AGRI-04/B*	*Agricultural mechanisation and labour organisation*	*7*	*F+E*	*O +S*	*no*
8	*AGR/11 AGRI-05/A*	*Sustainable pest control*	*6*	*F+E*	*PI / O*	*no*
2nd year - 1st period						
9	*C.I.*	*ARTHROPOD PEST MANAGEMENT IN MEDITERRANEAN CROPS*				
	AGR/11 AGRI-05/A	*Biological control*	*6*	*F+E*	*PI / O*	*no*

	AGR/11 AGRI-05/A	*Integrated pest management*	*6*	*F+E*	*PI / O*	*no*

10	*AGR/12 AGRI-05/B*	*Biological control of plant diseases*	*6*	*F+E*	*O*	*no*
11	*AGR/12 AGRI-05/B*	*Diagnosis in plant pathology*	*6*	*F+E*	*O*	*no*
2nd year - 2nd period						
12		*Optional subject*	*12*			
Further activities						
Other knowledge useful for job placement			*1*			
Final examination, by one of the following modalities:			*22*			
a) Final examination						
Data acquisition totally carried out in Italy			*18*			
Thesis writing			*4*			
b) Final examination						
Data acquisition totally carried out abroad			*18*			
Thesis writing			*4*			

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3. CURRICULUM "Economy and planning"

n.	SSD	Course title	ECTS	teaching method	Assessment of knowledge	Attendance
1st year - 1st period						
1	*AGR/04 AGRI-02/B*	*Vegetable and ornamental crop*	*6*	*F+E*	*PI / O*	*no*
2	*AGR/12 AGRI-05/B*	*Plant disease management*	*6*	*F+E*	*O*	*no*
3	*C.I.*	*SUSTAINABLE AGROECOSYSTEM*				
	AGR/13 AGRI-06/B	*Management of soil organic matter*	*6*	*F+E*	*PI / O*	*no*
	AGR/02 AGRI-02/A	*Sustainable management of cropping systems*	*6*	*F+E*	*O*	*no*
4	*AGR/08 AGRI-04/A*	*Water resource management in agriculture*	*6*	*F+E*	*O+S*	*no*
1st year - 2nd period						
5	*AGR/03 AGRI-03/A*	*Fruitculture*	*6*	*F+E*	*O*	*no*
6	*C.I.*	*REAL ESTATE VALUATION AND COMMON AGRICULTURAL POLICIES*				
	AGR/01 AGRI-01/A	*Rural estate*	*6*	*F+E*	*O + T*	*no*
	AGR/01 AGRI-01/A	*European Agricultural and Fisheries Policy*	*6*	*F+E*	*O+S*	*no*
7	*AGR/09 AGRI-04/B*	*Agricultural mechanisation and labour organisation*	*7*	*F+E*	*O+S*	*no*
8	*AGR/11 AGRI-05/A*	*Sustainable pest control*	*6*	*F+E*	*PI / O*	*no*
2nd year - 1st period						
9	*C.I.*	*STRATEGIC MANAGEMENT OF AGRICULTURAL FIRMS, MARKETS AND MARKETING*				
	AGR/01 AGRI-01/A	*Strategic management of the farm*	*6*	*F+E*	*O*	*no*
	AGR/01 AGRI-01/A	*Agri-Food markets and marketing*	*6*	*F+E*	*O + S*	*no*
10	*AGR/10* AGRI-04/C	*Rural buildings design*	*6*	*F+E*	*PI / O*	*No*
11	*AGR/09 AGRI-04/B*	*Technologies for innovation and safety in agriculture*	*6*	*F+E*	*PI / O*	*no*
2nd year - 2nd period						

12	*Optional subject*	*12*			
Further activities					
Other knowledge useful for job placement					
Final examination, by one of the following modalities:		*22*			
a) Final examination					
	Data acquisition totally carried out in Italy	*18*			
	Thesis writing	*4*			
b) Final examination					
	Data acquisition totally carried out abroad	*18*			
	Thesis writing	*4*			

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4. CURRICULUM "Zootechnical"

n.	SSD	Course title	ECTS	teaching method	Assessment of knowledge	Attendance
1st year - 1st period						
1	*AGR/04 AGRI-02/B*	*Vegetable and ornamental crops*	*6*	*F+E*	*PI / O*	*no*
2	*AGR/12 AGRI-05/B*	*Plant disease management*	*6*	*F+E*	*O*	*no*
3	*C.I.*	*SUSTAINABLE AGROECOSYSTEM*				
	AGR/13 AGRI-06/B	*Management of soil organic matter*	*6*	*F+E*	*PI / O*	*no*
	AGR/02 AGRI-02/A	*Sustainable management of cropping systems*	*6*	*F+E*	*O*	*no*
4	*AGR/08 AGRI-04/A*	*Water resource management in agriculture*	*6*	*F+E*	*O+S*	*no*
1st year - 2nd period						
5	*AGR/03 AGRI-03/A*	*Fruitculture*	*6*	*F+E*	*O*	*no*
6	*C.I.*	*REAL ESTATE VALUATION AND COMMON AGRICULTURAL POLICIES*				
	AGR/01 AGRI-01/A	*Rural estate*	*6*	*F+E*	*O + T*	*no*
	AGR/01 AGRI-01/A	*European Agricultural and Fisheries Policy*	*6*	*F+E*	*O+S*	*no*
7	*AGR/09 AGRI-04/B*	*Agricultural mechanisation and labour organisation*	*7*	*F+E*	*O+S*	*no*
8	*AGR/11 AGRI-05/A*	*Sustainable pest control*	*6*	*F+E*	*PI / O*	*no*
2nd year - 1st period						
9	*C.I.*	*APPLIED ANIMAL PRODUCTION*				
	AGR/19 AGRI-09/C	*Sustainable management of animal production system*	*6*	*F+E*	*O*	*no*
	AGR/19 AGRI-09/C	*Evaluation tools for quality management in livestock*	*6*	*F+E*	*O*	*no*
10	*AGR/17 AGRI-09/A*	*Genetic improvement of livestock*	*6*	*F+E*	*O*	*No*
11	*AGR/18* AGRI-09/B	*Animal nutrition and feeding*	*6*	*F+E*	*O*	*no*
2nd year - 2nd period						
12	*Optional subject*		*12*			

Further activities				
Other knowledge useful for job placement	*1*			
Final examination, by one of the following modalities:	*22*			
a) Final examination				
Data acquisition totally carried out in Italy	*18*			
Thesis writing	*4*			
b) Final examination				
Data acquisition totally carried out abroad	*18*			
Thesis writing	*4*			

ART. 8 – STUDENTS' DUTIES AND OBLIGATIONS
8.1 Students must comply with legislative, statutory and regulatory provisions and the directives issued by the competent authorities for the proper conduct of teaching and administrative activities.
8.2 Students must behave in a manner that does not damage the dignity and decorum of the University, respecting the Ethical Code, in all activities including internships and placements carried out at other national and international institutions.
8.3 Any sanctions are imposed by Rector's decree, according to current legislation.
8.4 All first-year students enrolled at the University of Catania must mandatorily attend the Information Course on Health and Safety in the Workplace, pursuant to Art. 36 of Legislative Decree 81/2008. In addition, students are required to complete the OPIS forms, preferably in the two time windows linked to the teaching period and in any case before booking exams for profit (forms 1 and 3) or at the time of enrollment in subsequent years (forms 2 and 4).