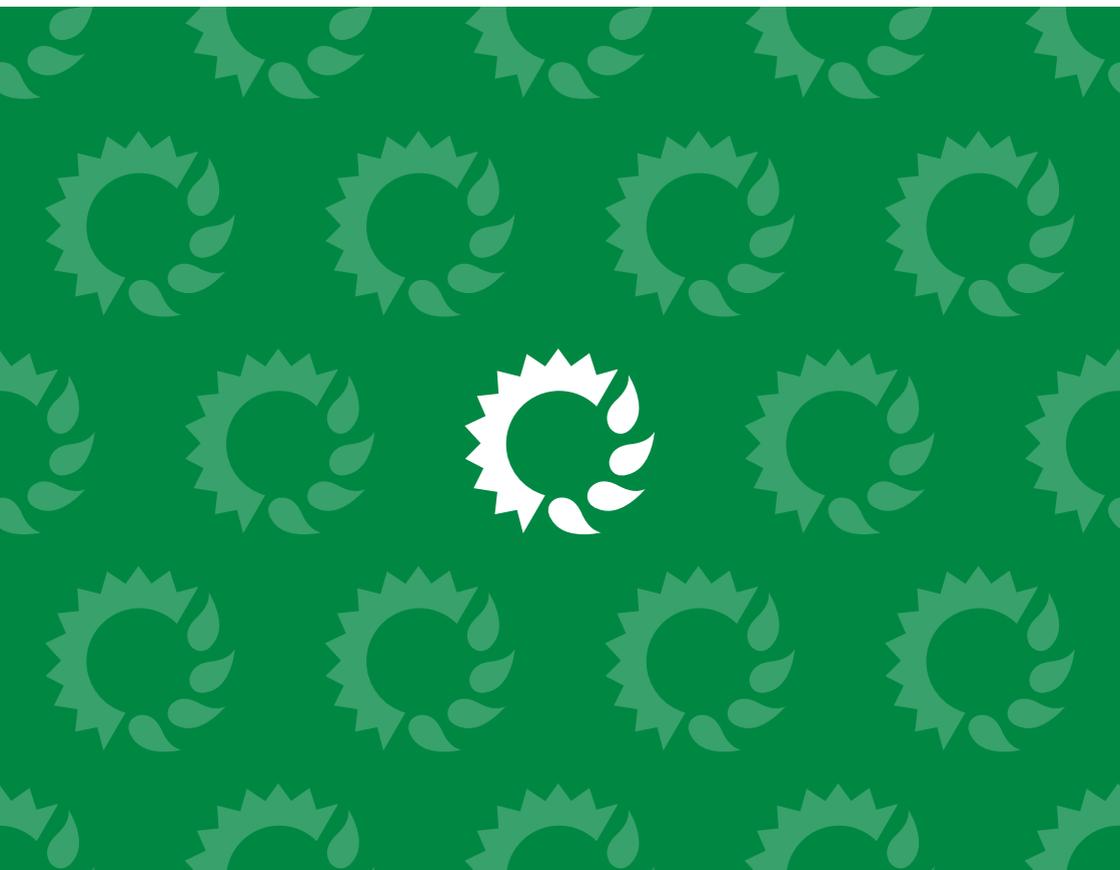




DEPARTMENT OF **AGRICULTURAL AND FORESTRY SCIENCES**



DEPARTMENT HANDBOOK
ACADEMIC YEAR 2018 / 2019



UNIVERSITÀ
DEGLI STUDI DELLA
Tuscia

DAFNE
DEPARTMENT
OF AGRICULTURAL
AND FORESTRY SCIENCES

Department handbook
Academic year 2018/2019

The courses
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Postgraduate study



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WELCOME



Professor Nicola Lacetera
Head of Department

As Head of Department I have the privilege to welcome you and to describe briefly some general aspects of the department to which you have decided to entrust your university career. The Department of Agricultural and Forestry Sciences (DAFNE) of the University of Tuscia in Viterbo has inherited a precious part of the Faculty of Agriculture of this University and it is the only university department of Lazio to offer a full range of higher education (three year degree courses, second level degree courses and PhDs) in the different areas of agricultural and forestry sciences. These curricula are complemented by a three year degree course in Mountain Sciences, which is offered in the city of Rieti, and a second level degree course in agricultural biotechnology.

The curricula have been created keeping the competences of the department's professors and the possible job opportunities in mind. The latter is one of the aspects enabling our graduates to find the best professional employment opportunities in the space of a short time from obtaining their degree. The course's theoretical component is combined with applied practical work which is carried out primarily in laboratories and at the experimental teaching farm. The practical component is at its best in the development of applied practical skills in traineeships. The DAFNE department organises them with professional organisations, agro-food and forestry products businesses, and with various other institutions and businesses including organisations

in the sector, parks and nature reserves, One other opportunity to acquire specific practical skills comes with the writing of the final dissertation for the three year degree course the end of the thesis for the second level degree course. Another vital aspect of the training we offer here is the connection between teaching and research activities. The research activities that the Department proposes are among the best in national and international academia, and they represent the main source of knowledge for the update and integration of programmes and teaching methods. It is in this type of research that the students themselves take centre stage, whether they are writing their theses for the second level degree course or carrying out activities for their research doctorate. In 2017, the high quality of the research activities carried out allowed the DAFNE department to be included in the 120 Italian Departments of Excellence. In the next 5 years, this will allow the DAFNE department to receive extra funding that will be invested in a project aimed at further improving the quality of teaching and research. The project's title is: "Sustainability of agriculture and forestry in the Mediterranean in the context of global change". Teaching at DAFNE is characterised by its international character. Right from the start of their three year degree course, students are given the opportunity to carry out a portion of their training at universities or research institutions abroad. The teaching staff of the Department encourage students' mobility within such programmes as Erasmus.

One more important aspect is that DAFNE and the University of Tuscia have been organising many initiatives for many years (work placements, 'Porta Futuro' and more). These aim to facilitate the relationship between students / new graduates and the job market, making it easier to look for and find a job.

I would like to close this presentation by wishing you all a very satisfying experience at DAFNE on behalf of all the Department staff and myself. I hope that you work hard and make full use of all the opportunities that you will be offered, to grow as individuals and professionals and be able to face any challenge you might face after your degree.



DAFNE

DEGREE COURSES

ACADEMIC YEAR 2018/2019



THREE YEAR DEGREE COURSE (L-25)

AGRICULTURAL AND ENVIRONMENTAL SCIENCES



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The three year degree course in Agricultural and Environmental Sciences offers knowledge and competences in various aspects of agricultural and environmental sciences, such as: the agricultural production and protection; breeding of the main zootechnical species; the first transformations of agro-zootechnical produce; agricultural economics and politics in agriculture; rural evaluations and the main molecular-biological, mechanical, hydraulic and building technologies in the production chain. The degree course also provides the theoretical foundations needed to understand how animals and plants work. At the same time, the course deals with sustainability and environmental protection in the field of agriculture.

The course includes frontal lessons and intense exercise programmes on the field and in laboratories. Students will also visit state-run and private farms and agro-food businesses. The course also includes a compulsory traineeship that students can do within a wide network of companies, professional organisations, agronomic offices and institutions operating within public intervention in agriculture. The traineeship allows students to face the practical issues in the different agricultural areas. One other point of contact with production is the drafting of the final dissertation. The three year study programme enables students to develop the processing and analysis skills to appraise and critically analyse problems and formulate solutions. The knowledge that it is possible to acquire during this time provides a systemic view of agricultural and zootechnical production which, amongst the different opportunities available, helps students become junior agronomists in accordance with DPR 328/2001.

The structure of the degree course is organised along two curricula: Agricultural and Environmental Sciences and Agricultural Biotechnology. These offer students the opportunity to focus on very specific themes in the field of Agricultural Sciences.

Educational goals

The Agriculture and Environmental Sciences curriculum aims at consolidating the knowledge of the most important scientific subjects. This will enable students

to acquire the skills needed to manage plant and animal production, to design installations and facilities for agricultural use or for animal husbandry, in plant health protection, in the transformation of agricultural produce, in the economic-technical management of businesses and in the valuation of agricultural resources. This curriculum offers four in-depth profiles: Agriculture & Environment, Territory, Environment and Landscape, Zootechnics and Quality Control Certification of Produce and Agricultural Processes. These profiles allow students to integrate a solid foundation with specialised training on the important themes needed for management and for competitiveness in agriculture. This multidisciplinary degree course equips students with the skills to operate directly in the sector of agriculture or similar areas, with the ability to interact with a diverse range of professionals. Moreover, it allows students to continue their studies in different second level degree courses, including Agricultural and Environmental Sciences (LM69). The curriculum in agricultural biotechnology allows students to consolidate the basic scientific tools. This allows students to learn the basic principles of agricultural, plant and animal biotechnology and to use critical thinking in the issues related to biotechnological applications in the field of agriculture. The curriculum also provides the operational competences needed for laboratory applications in the agricultural biotechnology sector. The traineeship in agricultural biotechnology will allow students to relate to the research sector thanks to some training experiences in academic laboratories and laboratories of other state-run and private organisations. The curriculum also prepares students to continue their studies with the specialised second level degree course in Biotechnology for Agriculture, the Environment and Health (LM7).

Career opportunities

A three year degree in Agricultural and Environmental Sciences can offer you a wide-range of career opportunities, for example, in plant and animal production and the protection of the environment and the territory, in addition to the technical-

economic sector of agriculture. The degree course prepares students to become junior agronomists after accessing the National Registry of qualified agronomists and forestry experts following the successful outcome of the state exam.

AGRICULTURAL AND ENVIRONMENTAL SCIENCES

EXAM	Professor	SSD	Year	Sem.	CFUs
Botanics	Luca Santi	BIO/03	I	I	8
Chemistry fundamentals	Roberta Bernini	CHIM/06	I	I	8
Mathematics and physics fundamentals	Alvaro Marucci	MAT/05	I	I	8
English language	*	L-LIN/12	I	I	6
Biology and domestic animals breeding:					
- Special zootechnology: technologies for animal breeding	Nicola Lacetera	AGR/19	I	II	6
- Animal biology and general zootechnology	Patrizia Morera	AGR/19	I	II	6
Physiology and principles of plant biotechnologies	*	BIO/04	I	II	6
Agricultural economy fundamentals	Saverio Senni	AGR/01	I	II	6
Agricultural genetics	Carla Ceoloni	AGR/07	I	II	6
Agronomy	Raffaele Casa	AGR/02	II	I	7
Horticulture and floriculture	Giuseppe Colla	AGR/04	II	I	6
Hydraulics and mechanics for agriculture					
- Water engineering	Andrea Petroselli	AGR/08	II	I	6
- Mechanics for agriculture	Danilo Monarca	AGR/09	II	I	6
Tree crops	Rosario Muleo	AGR/03	II	II	6
Grass crops	Enio Campiglia	AGR/02	II	II	6
Rural buildings and topography	Alvaro Marucci	AGR/10	II	II	8
Farm economy	Gabriele Dono	AGR/01	III	I	6
Agrarian industries	Marco Esti	AGR/15	III	I	6
Crop protection:					
- Agrarian entomology	Adalgisa Guglielmino	AGR/11	III	I	6
- Plant pathology	Leonardo Varvaro	AGR/12	III	II	6
Agricultural evaluation	Attilio Coletta	AGR/01	III	II	6

EXAM	Professor	SSD	Year	Sem.	CFUs
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ENVIRONMENTAL AGRARIAN PROFILE

Soil chemistry	Stefania Astolfi	AGR/13	II	I	6
Agrarian ecology	Roberto Mancinelli	AGR/02	II	II	6
Energy and environment workshop	Maurizio Carlini	ING-IND/09	III	I	3

LIVESTOCK PROFILE

Animal well being and health and livestock environmental impact	Nicola Lacetera	AGR/19	II	I	6
Livestock nutrition	Umberto Bernabucci	AGR/18	II	II	6
Energy and environment workshop	Maurizio Carlini	ING-IND/09	III	I	3

TERRITORY, ENVIRONMENT AND LANDSCAPE PROFILE

Regional planning	Antonio Leone	ICAR/20	II	I	6
Landscape architecture workshop	*	ICAR/15	II	II	6
GIS workshop	Fabio Recanatesi	AGR/10	III	II	3

PRODUCT QUALITY AND AGRICULTURAL PROCESS CERTIFICATION PROFILE

Process and plant production quality and certification	Enio Campiglia	AGR/02	II	I	6
Process and animal production quality and certification	Umberto Bernabucci	AGR/18	II	II	6
Energy and environment workshop	Maurizio Carlini	ING-IND/09	III	I	3

Training activities chosen by the student			I		12
Training			II		13
Final test			III		5

AGRICULTURAL BIOTECHNOLOGY

EXAM	Professor	SSD	Year	Sem.	CFUs
Botanics	Luca Santi	BIO/03	I	I	8
Chemistry fundamentals	Roberta Bernini	CHIM/06	I	I	8
Mathematics and physics fundamentals	Alvaro Marucci	MAT/05	I	I	8
English language	*	L-LIN/12	I	I	6
Biology and domestic animals breeding:					
- Special zootechnology: technologies for animal breeding	Nicola Lacetera	AGRA/19	I	II	6
- Animal biology and general zootechnology	Patrizia Morera	AGR/19	I	II	6
Physiology and principles of plant biotechnologies	*	BIO/04	I	II	6
Agricultural economy fundamentals	Saverio Senni	AGR/01	I	II	6
Agricultural genetics	Carla Ceoloni	AGR/07	I	II	6
Agronomy	Raffaele Casa	AGR/02	II	I	7
Plant production biotechnologies:					
- Genetic biotechnologies	Stefania Masci	AGR/07	II	I	6
- Biotechnologies for the improvement of agrarian plants	Andrea Mazzucato	AGR/07	II	I	6
Horticulture and floriculture	Giuseppe Colla	AGR/04	II	I	6
In vitro culture science and technique	Cristian Silvestri	AGR/03	II	I	6
Tree crops	Rosario Muleo	AGR/03	II	II	6
Grass crops	Enio Campiglia	AGR/02	II	II	6
Rural buildings and topography	Alvaro Marucci	AGR/10	II	II	8
Animal biotechnologies	Loredana Basiricò	AGR18	III	I	6
Agrarian industries	Marco Esti	AGR/15	III	I	6
Energy and environment workshop	Maurizio Carlini	ING-IND/09	III	I	3
Crop protection					
- Agrarian entomology	Adalgisa Guglielmino	AGR/11	III	I	6
- Agrarian pathology	Leonardo Varvaro	AGR/12	III	II	6
Molecular biology of agrarian plants	Francesco Sestili	AGR/07	III	II	6
Agricultural evaluation	Attilio Coletta	AGR/01	III	II	6
Training activities chosen by the student			I		12
Training			II		13
Final test			III		5

THREE YEAR DEGREE COURSE (L-25)

FORESTRY AND NATURAL SCIENCES

DAFNE - DIBAF cross-department course
Dafne administration office



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Educational goals

The degree course in Forestry and Natural Sciences (SFN) deals with forestry and nature management and conservation in all their complexity and entirety. It aims at bridging the gap between natural science knowledge and practical, project-based knowledge.

In order to face the challenges of the contemporary world, the three-year degree course allows graduates to understand and interpret the natural environment's main aspects and issues as well as local and global environments, and to connect them with the sustainable management of forestry and of the other local natural system. The course is aimed at gaining an open perspective on international priorities in the realm of forestry and the protection of the global environment.

The main themes are the analysis of forestry, the monitoring of different ecosystems, the sustainable management and conservation of forestry, the prevention of neglect and the restoration of coastal, hill and mountain areas, the evaluation and development of forestry products and of the services that the woods offer society.

The course has three paths, each offering a deeper knowledge and understanding of different, more specific areas:

■ **Protected areas and Landscape Management**

It provides the knowledge and tools needed to operate in protected areas. The course offers insights into the wildlife management and livestock systems, biochemistry and soil chemistry, forestry genetics and the conservation of biodiversity, phylogenetics and the management of phytosanitary emergencies;

■ **Ecoengineering**

This path is oriented towards technological-engineering applications to forestry and nature, with insights into landscape and forestry representation and analysis, mechanisation and use of forestry resources from the point of view of job safety, the production of renewable energy and the management of urban green areas.

■ **Forestry resources and international cooperation**

This path is oriented towards forestry development,

with insights into pedology, resource inventory and the prevention of fires, mountain livestock and international cooperation. Students will also deepen their knowledge on the genetic improvement of trees in terms of wood quality.

The three-year course has been developed with the cooperation of professional associations and regional authorities. It gives students an in-depth knowledge of forestry and environmental management and is characterised by a practical approach allowing young graduates an easier start in the job market.

Practical activities are carried out in workshops and on-site. The training includes time spent in the Alpine and Apennine environment with specific exercises and student mobility programmes (Erasmus, training and internships in Italian and foreign companies).

In order to obtain their degrees, students have to total 180 university credits (CFU) and pass a final test. The test requires students to write and discuss a dissertation resulting from a personal detailed analysis of a specific aspect that is in line with their degree course, under the supervision of a professor.

Career opportunities.

Graduates in Forestry resources and international cooperation are able to aptly manage renewable natural resources (forestry in particular) and to deal with biodiversity conservation, the protection of agro-forestry landscape and the management of protected natural areas.

Following a successful state examination, graduates can enter the Agronomists and Forestry national register (section B).

PROTECTED AREAS AND LANDSCAPE MANAGEMENT

EXAM	Professor	SSD	Year	Sem.	CFUs
Mathematics and physics fundamentals	Alvaro Marucci	MAT/05	I	I	8
Chemistry fundamentals	Roberta Bernini	CHIM/06	I	I	8
General and systematic zoology	Marzio Zapparoli	BIO/05	I	I	6
English language	*	L-LIN/12	I	I	6
Biochemistry and soil chemistry	Stefania Astolfi	AGR/13	I	II	6
Botanics:					
- General botanics	Alfredo Di Filippo	BIO/03	I	II	6
- Plant diversity	Anna Scoppola	BIO/03	I	II	6
Geology	Sergio Madonna	GEO/02	I	II	6
IT and statistical abilities	M. A. Pagnotta		I	II	5
Forestry mechanisation	Danilo Monarca	AGR/09	II	II	6
Dendrology	Gianluca Piovesan	AGR/05	II	I	6
Forest ecology	Dario Papale	AGR/05	II	I	6
Forestry genetics and conservation of biodiversity:					
- Forestry genetics	M. A. Pagnotta	AGR/07	II	I	6
- Forestry biodiversity conservation	Marco Simeone	AGR/05	II	I	6
Dendrometry and elements of forest management	Luigi Portoghesi	AGR/05	II	I	6
Water and environmental engineering:					
- Forest hydric regime control activities	Salvatore Grimaldi	AGR/08	II	II	6
- Forestry constructions and environment inspection	Alvaro Marucci	AGR/10	II	II	6
Forestry	Bartolomeo Schirone	AGR/05	II	II	6
Phytogeography and ecology of the plant landscape	Goffredo Filibeck	BIO/03	II	II	6
Economy and forestry and environmental appraisal	Simone Severini	AGR/01	III	I	7
Extensive zootechnology and wildlife management:					
- Extensive zootechnology systems	Bruno Ronchi	AGR/18	III	I	6
- Management of wildlife resources	Andrea Amici	AGR/19	III	I	6
Forestry technologies	Angela Lo Monaco	AGR/06	III	I	6
Control and monitoring of phytosanitary emergencies	Angelo Mazzaglia	AGR/12	III	II	6
Environmental and forestry defence and monitoring:					
- Forestry pathology	Andrea Vannini	AGR/12	III	II	6
- Forestry entomology	Stefano Speranza	AGR/11	III	II	6
Training activities chosen by the student			II - III		12
Training			II - III		4
Final test			III		4

ECOENGINEERING

EXAM	Professor	SSD	Year	Sem.	CFUs
Mathematics and physics fundamentals	Alvaro Marucci	MAT/05	I	I	8
Chemistry fundamentals	Roberta Bernini	CHIM/06	I	I	8
General and systematic zoology	Marzio Zapparoli	BIO/05	I	I	6
English language	*	L-LIN/12	I	I	6
Cartography and GIS applications	Fabio Recanatesi	AGR/10	II	I	6
Botanics:					
- General botanics	Alfredo Di Filippo	BIO/03	I	II	6
- Plant diversity	Anna Scoppola	BIO/03	I	II	6
Geology	Sergio Madonna	GEO/02	I	II	6
IT and statistical abilities	M. A. Pagnotta		I	II	5
Forestry mechanisation	Danilo Monarca	AGR/09	II	II	6
Dendrology	Gianluca Piovesan	AGR/05	II	I	6
Forest ecology	Dario Papale	AGR/05	II	I	6
Analysis and management of rural and urban landscape:					
- Landscape analysis workshop	M. N. Ripa	AGR/10	II	I	6
- Green management	Roberto Ruggeri	AGR/02	II	II	6
Dendrometry and elements of forest management	Luigi Portoghesi	AGR/05	II	I	6
Water and environmental engineering:					
- Forest hydric regime control activities	Salvatore Grimaldi	AGR/08	II	II	6
- Forestry constructions and environment inspection	Alvaro Marucci	AGR/10	II	II	6
Forestry	Bartolomeo Schirone	AGR/05	II	II	6
Biochemistry and soil chemistry	Stefania Astolfi	AGR/13	I	II	6
Economy and forestry and environmental appraisal	Simone Severini	AGR/01	III	I	7
Renewable resources and energy:					
- Renewable energy	Maurizio Carlini	ING/IND 09	III	I	6
- Forestry use	Rodolfo Picchio	AGR/06	III	I	6
Forestry technologies	Angela Lo Monaco	AGR/06	III	I	6
Safety and accident prevention in the agro-forest sector	Andrea Colantoni	AGR/09	III	II	6
Environmental and forestry defence and monitoring:					
- Forestry pathology	Andrea Vannini	AGR/12	III	II	6
- Forestry entomology	Stefano Speranza	AGR/11	III	II	6
Training activities chosen by the student			II e III		12
Training			II-III		4
Final test			III		4

FORESTRY RESOURCES AND INTERNATIONAL COOPERATION

EXAM	Professor	SSD	Year	Sem.	CFUs
Mathematics and physics fundamentals	Alvaro Marucci	MAT/05	I	I	8
Chemistry fundamentals	Roberta Bernini	CHIM/06	I	I	8
General and systematic zoology	Marzio Zapparoli	BIO/05	I	I	6
English language	*	L-LIN/12	I	I	6
Forest pedology	Sara Marinari	AGR/14	I	II	6
Botanics:					
- General botanics	Alfredo Di Filippo	BIO/03	I	II	6
- Plant diversity	Anna Scoppola	BIO/03	I	II	6
Geology	Sergio Madonna	GEO/02	I	II	6
IT and statistical abilities	M. A. Pagnotta		I	II	5
Forestry mechanisation	Danilo Monarca	AGR/09	II	II	6
Dendrology	Gianluca Piovesan	AGR/05	II	I	6
Forest ecology	Dario Papale	AGR/05	II	I	6
Inventories and forest defence:					
- Geomatics and forestry inventories	Anna Barbati	AGR/05	II	I	6
- Defence from fires in the Euro-Mediterranean region	Piermaria Corona	AGR/05	II	I	6
Dendometry and elements of forest management	Luigi Portoghesi	AGR/05	II	I	6
Water and environmental engineering:					
- Forest hydric regime control activities	Salvatore Grimaldi	AGR/08	II	II	6
- Forestry constructions and environment inspection	Alvaro Marucci	AGR/10	II	II	6
Forestry	Bartolomeo Schirone	AGR/05	II	II	6
Alpiculture	Alessio Valentini	AGR/17	II	II	6
Economy and forestry and environmental appraisal	Simone Severini	AGR/01	III	I	7
Adaptation and quality of forestry resources:					
- Improvement of forestry genetics	Mario Ciaffi	AGR/07	III	I	6
- Wood technologies workshop	Manuela Romagnoli	AGR/06	III	I	6
Forestry technologies	Angela Lo Monaco	AGR/06	III	I	6
International cooperation	Blasi	AGR/01	III	II	6
Environmental and forestry defence and monitoring:					
- Forestry pathology	Andrea Vannini	AGR/12	III	II	6
- Forestry entomology	Stefano Speranza	AGR/11	III	II	6
Training activities chosen by the student			II e III		12
Training			II-III		4
Final test			III		4

THREE YEAR DEGREE COURSE (L-25)

MOUNTAIN SCIENCES

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Educational goals

The three-year degree course in Mountain Sciences (L-25), the only one in Italy, aims at providing graduates all the necessary competences for the analysis, design and management of mountain regions and their resources, with particular reference to Apennine and Mediterranean areas. The university training of Agricultural and Forestry Sciences graduates is enhanced by the promotion of mountain areas to ensure financial, tourism and business growth. The training programme aims at a technician with diverse skills and abilities in forestry, agriculture, the environment and finance through the management of the natural resources of mountain areas with a view to improving the financial and environmental aspects. Furthermore, it will enable you to identify and prevent risk of environmental damage, and to propose sustainable solutions for the promotion of hill and mountain agriculture and their relative produce, not to mention the connected potential of green tourism. Students will possess a good knowledge of chemistry and biology as well as their application-related aspects, they will learn the basics of scientific inquiry and they will be familiar with the advanced methods of analysis of environmental parameters. The main subjects taught are related to the practical applications of agricultural and forestry engineering. Students are taught how to approach reforestation projects aimed at safeguarding the soil and water springs, the stabilisation of slopes and river banks, the prevention and limitation of land degradation, the production, collection and improvement of mountain products. You will acquire skills to enable you to reclaim marginalised geographic and socio-economic areas of mountain environments with significant naturalistic and recreational value, through, for example, the planning and design of parks and protected areas. The course on Mountain Sciences is a job-oriented course with a practical approach which allows graduates to quickly enter the job market and allows students to acquire solid foundations to continue his or her course of study with a second cycle degree course and a master's. The training includes time spent in the Alpine

and Apennine environment and student mobility programmes (ERASMUS, training and internships in Italian and foreign companies).

Career opportunities

The course on Mountain Sciences is a job-oriented course with a practical approach which allows graduates to quickly enter the job market. It allows students to acquire competences allowing them to work as mountain agronomists, biodiversity conservation experts, forestry engineering experts and experts of the financial improvement of mountain areas.

Following a successful state examination, the three-year degree course allows students to enter the Agronomists and Forestry national register - Junior B section. Graduates can work for ministries, regional authorities, parks, protected areas, mountain communities, industries, business operating in the environmental sector, and companies specialising in consulting and design in this sector. Graduates can also teach vocational training courses.

The degree course allows students to acquire solid foundations to continue his or her course of study with a second cycle degree course and a master's.

EXAM	Professor	SSD	Year	Sem.	CFUs
General biology	*	BIO/01	I	I	6
Chemistry fundamentals	*	CHIM/06	I	I	8
Geology	Sergio Madonna	GEO/02	I	I	6
English language	*	L-LIN/12	I	I	6
Maths	*	MAT/05	I	I	6
Botanics and elements of plant ecology	Alfredo Di Filippo	BIO/03	I	II	7
Economy and development policies of mountain landscapes	*	AGR/01	I	II	6
Physics	*	FIS/01	I	II	6
IT and statistical abilities	M. A. Pagnotta	INF/01	II	I	6
Conservation of mountain ecosystems	*	BIO/07	II	I	6
Agro-food industries	*	AGR/15	II	I	6
Management of mountain forests:					
- Mountain dendrology and dasology	Bartolomeo Schirone	AGR/05	II	I	7
- Dendometry and forestry	Gianluca Piovesan	AGR/05	II	I	7
Mountain zootechnology	*	AGR/18	II	I	6
Plant diversity	*	BIO/03	II	II	6
Plant genetics	M. A. Pagnotta	AGR/07	II	II	6
Local IT systems workshop	*	AGR/10	II	II	6
Monitoring and defence of the mountain environment:					
	*	AGR/11	III	I	6
- Entomology of the mountain environment	Angelo Mazzaglia	AGR/12	III	I	6
- Forestry pathology					
Mountain agriculture:					
- Fruit agriculture	Valerio Cristofori	AGR/02	III	I	6
- Alpiculture	Francesco Rossini	AGR/03	III	I	6
Water and mountain landscape engineering:					
- Hydrology and hydric control activities	Andrea Petroselli	AGR/08	III	I	6
- Landscape construction, inspection and representation in the mountain environment.	Alvaro Marucci	AGR/10	III	I	8
Mountain promotion enhancement:					
- Ecotourism and mountain marketing	*	SECS-P/08	III	II	6
- Typical and quality mountain areas products	Umberto Bernabucci	AGR/18	III	II	6
Training activities chosen by the student			I/III		12
Training			II/III		7
Final test			III		4

MASTER'S DEGREE COURSE (LM-7)

BIOTECHNOLOGY FOR AGRICULTURE, THE ENVIRONMENT AND HEALTH



Administrator

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Educational goals

The second cycle degree course in Biotechnology for Agriculture, the Environment and Health (CdLM/BioSiQuAl) is aimed at giving graduates a deep knowledge of the scientific aspects related to biotechnology for the development and improvement of agricultural authorities. Students will learn about the quality and safety control of raw materials and agro-food products, how to improve their nutritional and health value through the study of natural organic substances included in food and agro-industrial waste, and how to use them as ingredients in nutraceutical and pharmaceutical preparations. The CdLM/BioSiQuAl course offers extremely specialised training. Graduates will have the knowledge and skills needed to analyse different biological and agro-food systems to understand, design and develop solutions to the issues related to animal and crop production in a rational, innovative and sustainable way. The demand for natural organic substances and bioactive molecules to replace synthetic products through biotechnologies and extraction processes deriving from agro-industrial waste moves production towards a type of agriculture that provides products for industrial use that are connected to green chemistry and to the agro-industrial, manufacturing and energy sectors. All the courses are completed by a series of practical workshops in laboratories and on the field. The CdLM/BioSiQuAl course includes several scientific cooperation agreements/conventions with other research authorities and businesses operating in agro-biotechnology, the nutraceutical and pharmaceutical sectors. This gives students research opportunities and it exposes them to the world of production thanks to educational visits, training courses and 'external' dissertations. The course includes 11 exams and 12 CFUs from vocational training chosen by the student, 6 for English, 4 for training and 23 for the final dissertation.

Career opportunities

Graduates will find work in state-run and private organisations or work as self-employed professionals and entrepreneurs.

There are many job opportunities for these graduates:

- researcher, technician and similar in state-run and private research organisations dealing with innovative, quality and low-environmental impact products and with the characterisation of bioactive molecules;
- regional associations aimed at developing and innovating agriculture and the environment (decontamination, environment conservation and improvement);
- national and international food safety agencies;
- seed companies dealing with the selection and certification of plant varieties;
- pharmaceutical and nutraceutical production and distribution companies;
- companies dealing with the certification of primary production;
- national and international breeders for the management of genetic improvement;
- International cooperation for technological development and the improvement and conservation of the environment;
- public and private monitoring institutes and agencies for phytosanitary control and protection of plants;
- armed forces, Carabinieri scientific investigation teams and specialised departments of the Italian Navy for technical-scientific support;

the ISTAT employment rate for second degree course graduates after one and three years from the degree equals 75% and 79% respectively (ALMALAUREA 2017).

EXAM	Professor	SSD	Year	Sem.	CFUs
Plant species genomics and biotechnological applications:					
- Plant species genomics	Carla Ceoloni	AGR/07	I	I	6
- Biotechnological applications and bioinformatics	Francesco Sestili	AGR/07	I	I	6
Bio-economy	Gabriele Dono	AGR/01	I	I	7
Biotechnologies and animal production nutraceutical	Umberto Bernabucci	AGR/18	I	I	6
Genetic improvement and seed biotechnologies	Andrea Mazzucato	AGR/07	I	II	6
Traditional and innovative food biotechnologies	Marco Esti	AGR/15	I	II	6
Chemistry of natural organic substances	Roberta Bernini	CHIM/06	I	II	6
Plant biotechnologies and pharmaceutical products	Luca Santi	BIO/15	I	II	6
English language	*	L-LIN/12	I	II	6
Quality and traceability of plant-based products	Stefania Masci	AGR/07	II	I	7
Quality and traceability of animal-based products	Pierpaolo Danieli	AGR/18	II	I	7
Biotechnologies and fruit plants nutraceutical	Rosario Muleo	AGR/03	II	I	6
One of the following three optional exams:					
Soil fertility and plant nutrition	Stefania Astolfi	AGR/13	II	I	6
Biotechnologies for stress control	*	BIO/04	II	I	6
Phytopathological agro-industrial biotechnologies	G. M. Balestra	AGR/12	II	I	6
Training activities chosen by the student			I/II		12
Training			I/II		4
Thesis			II		23

MASTER'S DEGREE COURSE (LM-69)

AGRICULTURAL AND ENVIRONMENTAL SCIENCES



Course Director

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Educational goals

This degree course allows students to acquire in-depth and specialised knowledge and competences related to plant production and livestock aimed at planning and managing innovation in agricultural production from a quality and quantity point of view. The systemic approach combines biologic knowledge and needs with business and local resources, technical tools and environmental sustainability. The course has a common basis and three specialised profiles:

The common basis are focussed on the research methodology in agriculture, the innovation and management of agricultural and livestock systems, sustainable strategies aimed at protecting crops, the development of quality plant products, business management and investment analysis, agricultural mechanization, regional safety and setup and work safety in their most innovative aspects.

The following three study pathways will enable you to focus in greater depth on specific areas of interest:

- Crops Module focuses on: the quality of crop production, the genetic improvement of crops, and the production of fruit and vegetables, and viticulture;
- Land and Economics Module focuses on: optimization of land use, job security in agriculture, and the economics and policies of rural development;
- a livestock profile; students learn how to optimize forage production and conservation, gain knowledge on food science and techniques in livestock management and on the quality of animal products.

For the degree to be conferred, you must acquire a total of 120 university credits (CFU). The final exam will give you 20 of the 120 CFU. You will also be granted 12 CFU for a topic of your choice from among all the subjects and training opportunities that the Department and/or the University offers. As a graduate you will have received a thorough grounding in all the aspects necessary to successfully practice the complex profession of agronomist.

The study pathways of the two-year course and the relative structures are listed below.

Career opportunities

This course prepares students to become

- agronomist in public and private institutions;
- self-employed Senior agronomers;
- head managers of farms, with competences on production and the protection of post-harvest activities, with a view to environmentally safeguarding products and ensuring the sustainability of the quality of fresh produce and their consumption and working on food and industrial transformation;
- manager of a livestock farm, with specific competences regarding the nutrition, hygiene and well-being of the animals and the quality of the produce;
- consultant agronomists operating for the protection of the environment, of rural and urban land, of the landscape, of occupational safety and of agricultural extension.

The multidisciplinary nature of this Master's Degree will offer you a wide range of choices, both in the running and management of farms and livestock and agro-food industries, and in a managerial capacity in the services sector, in commerce and public administration. As a graduate you will have received a thorough background in all the aspects necessary to successfully practice the complex profession of agronomist. After five years from the degree, the ISTAT employment rate for second degree course SAA graduates was 83.3% in 2016 (ALMA LAUREA data, source: ISTAT).

EXAM	Professor	SSD	Year	Sem.	CFUs
Microbiology applied to cultivation systems	Elena Di Mattia	AGR/16	I	I	6
Landscape structure and agricultural mechanisation:					
- Landscape structure	Maria Nicolina Ripa	AGR/10	I	I	8
- Agricultural mechanisation	Daniilo Monarca	AGR/09	I	I	6
Cultivation systems	Francesco Rossini	AGR/02	I	II	6
Tree cultivation for the quality of productions	Rosario Muleo	AGR/03	I	II	6
Sustainable strategies in the protection of agricultural cultivation:					
- Agricultural entomology strategies	Stefano Speranza	AGR/11	I	II	6
- Plant pathology strategies	Giorgio Balestra	AGR/12	I	II	6
Agricultural policies and management of agricultural enterprises:					
- Agricultural policies and market evolution	Simone Severini	AGR/01	II	I	6
- Management of agricultural enterprises and investment analysis	Gabriele Dono	AGR/01	II	I	6
Research methodologies in agriculture	Raffaele Casa	AGR/02	II	I	6
Zootechnology systems	Bruno Ronchi	AGR/18	II	II	6

CULTIVATION PROFILE

Horticultural cultivation in a protected environment	Giuseppe Colla	AGR/04	II	I	6
Viticulture	Massimo Muganu	AGR/03	II	II	6
Genetic improvement of cultivated plant species	Andrea Mazzucato	AGR/07	II	II	6

LANDSCAPE ECONOMIC PROFILE

Rural landscape planning	Fabio Recanatesi	AGR/10	II	I	6
Rural development economy and policies	Saverio Senni	AGR/01	II	II	6
Job safety in agriculture	Massimo Cecchini	AGR/09	II	II	6

LIVESTOCK PROFILE

Quality and security of animal-based products	Pier Paolo Danieli	AGR/18	II	I	6
Forage cultivation	Roberto Mancinelli	AGR/02	II	II	6
Food science and techniques in zootechnical systems	Umberto Bernabucci	AGR/18	II	II	6

Training activities chosen by the student			I/II		12
Training			I/II		2
Thesis			II		20

MASTER'S DEGREE COURSE (LM-73)

CONSERVATION
AND RESTORATION
OF FORESTS AND SOIL
CONSERVATION



Course Director

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Educational goals

This second level degree course is aimed at graduates who wish to specialise in the sectors of conservation and redevelopment or restoration of environmental and forest degradation. The course is unique in that it is a blend of bio-ecological and geological-engineering studies with a thorough grounding in forestry theory and skills. The course will suit you if you wish to further your studies in order to work at a managerial and supervisory level in the sector of soil protection, forest planning and biodiversity and landscape conservation, including the use of biotechnology, or if you wish to follow a career in innovative sectors. Furthermore, the in-depth studies that the course offers will enable you to access the sector of technological innovation and scientific research, for example, on a research doctorate programme. CRAF (Conservation and Restoration of the Forest Environment and Soil Protection) is the only master's degree course with this title, not only in Viterbo, but also nationally as can easily be determined by comparing course study programmes. The study pathway of this master's degree course will equip you with specialised knowledge and skills in the following sectors:

- analysis and monitoring of the forest ecosystems in mountain, hill and coastal environments;
- biodiversity conservation strategies;;
- sustainable management, eco-certification and conservation of mountain, hill and coastal environment resources;;
- planning and management of forest cultivation works, of reforestation and of tree cultivation for timber;
- planning and management of eco-engineering works for the prevention and mitigation of the phenomena of hydro-geological instability, the fight against desertification and the protection of water sources and water tables;
- planning and management of eco-engineering works for the ecological improvement, reconstruction and restoration of deteriorated environments;
- analysis and evaluation of the environmental impact in mountain and forest areas;

- ecological land development and landscape planning.

CRAF offers study pathways with two different programmes: Biodiversity Monitoring and Conservation and Environment Management and Restoration. To enrol in the CRAFDS programme you will need a degree in or equivalent to the courses: L-21, L-25, L-32. Students who wish to enrol on this degree course must possess specific minimum requirements. Students are required to undertake an interview aimed at ensuring they possess the appropriate prerequisites. The interview committee will be formed by a minimum of three course professors. Students are required to have a minimum of 30 CFUs in the scientific disciplinary sectors: MAT/01-09, CHIM/06, CHIM/03, BIO/03, AGR/05, AGR/07 e AGR/13. During the interview, the student's knowledge of English will also be assessed. Students must have at least a B2 CEFR level.

Career opportunities

The MSc in CRAF can offer you a wide-range of career opportunities, for example: teaching; research in industry or at one of the many state structures, such as the Command for forest, environment and agro-food conservation, the new branch of Carabinieri that took over some of the tasks previously carried out by the Forestry Corps or technical military corps with specific competences in the environmental sector; regional authorities, town halls, park authorities, establishments in charge of land management activities, nature reserves; private environmental planning and engineering companies; companies and establishments that operate in the forestry and environmental conservation sector; collaborating in environmental association activities, also in relation to environmental publications and communications; freelance work - an MSc graduate can register with the Albo Professionale dei Dottori Agronomi e Forestali (National Registry of Qualified Agronomists and Forestry Specialists.) In general, as a CRAFDS graduate, you can expect to be responsible for conceptualising, planning, managing, controlling, coordinating and training in all public and private

structures that operate in the sectors of land planning and protection, the sustainable management of forests and other natural resources, in the protection, conservation and redevelopment of the environment and nature, in particular, forest environments.

BIODIVERSITY MONITORING AND CONSERVATION

EXAM	Professor	SSD	Year	Sem.	CFUs
Evolutionary entomology	Adalgisa Guglielmino	AGR/11	I	I	6
Forest and forest products certification	Angela Lo Monaco	AGR/06	I	I	6
Evaluation of forest and environmental goods and services	Francesco Carbone	AGR/01	I	I	6
Bioindicators:					
- Bioindicators	Romolo Focchetti	BIO/05	I	II	6
- Vertebrates monitoring	Andrea Amici	AGR/19	I	II	6
Geobotanics and flora conservation:					
- Applied geobotanics	Goffredo Filibeck	BIO/03	I	II	6
- Flora analysis and conservation	Anna Scoppola	BIO/03	I	II	6
Biochemistry and forest microbiology:					
- Plant fertility and nutrition	Stefania Astolfi	AGR/13	I	II	6
- Forest soil microbiology	Elena Di Mattia	AGR/16	I	II	6
Nature conservation	Alfredo di Filippo	BIO/03	II	I	6
Planning and eco-management of the forest environment	Gianluca Piovesan	AGR/05	II	I	7
Planning and forestry sites	Rodolfo Picchio	AGR/06	II	I	6
Training activities chosen by the student			II		8
Conservation and restoration of forests:					
- Forest ecogenetics	Marco Simeone	AGR/05	II	II	6
- Restoration of forests	Bartolomeo Schirone	AGR/05	II	II	7
Geology applied to the environment	Vincenzo Piscopo	GEO/05	II	II	6
Training			II		4
Final test			II		16

ENVIRONMENT AND LANDSCAPE RESTORATION

EXAM	Professor	SSD	Year	Sem.	CFUs
Evolutionary entomology	Adalgisa Guglielmino	AGR/11	I	I	6
Mechanisation for forest restoration intervention	Andrea Colantoni	AGR/09	I	I	6
Evaluation of forest and environmental goods and services	Francesco Carbone	AGR/01	I	I	6
Landscape ecology fundamentals:					
- Geomatics and remote sensing in landscape planning	Fabio Recanatesi	AGR/10	I	II	6
- Applied geobotanics	Goffredo Filibeck	BIO/03	I	II	6
Biochemistry and forest microbiology:					
- Plant fertility and nutrition	Stefania Astolfi	AGR/13	I	II	6
- Forest soil microbiology	Elena Di Mattia	AGR/19	I	II	6
Hydrographic basin management:					
- Environmental engineering	*	AGR/08	I	II	6
- Hydrologic and hydraulic modelling	Andrea Petroselli	AGR/08	I	II	6
Landscape analysis and planning	Maria Nicolina Ripa	AGR/10	II	I	6
Planning and eco-management of the forest environment	Gianluca Piovesan	AGR/05	II	I	7
Progettazione e cantieri forestali	Rodolfo Picchio	AGR/06	II	I	6
Training activities chosen by the student			II		8
Conservation and restoration of forests:					
- Forest ecogenetics	Marco Simeone	AGR/05	II	II	6
- Restoration of forests	Bartolomeo Schirone	AGR/05	II	II	7
Geology applied to the environment	Vincenzo Piscopo	GEO/05	II	II	6
Training			II		4
Final test			II		16

POSTGRADUATE STUDIES AND MASTER'S RESEARCH DOCTORATE

PhD in **Plant and Animal Production Sciences (SPVA)**

Coordinator

Professor Stefania Masci
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Dafne administration office

The general aim of this PhD course is to train researchers who are able to carry out various aspects of research autonomously, from conceptualising to planning and to the realisation of a project. Specific aims relate to the wide-ranging aspects of agricultural production, using traditional and innovative methodologies. To complete their training, SPVA doctoral students will be guided in their choice of specific courses, they will benefit from seminars, work experience in institutions abroad, and will be actively encouraged to participate in conventions.

PhD in **Engineering for Energy and Environment (EEE)**

Coordinator

Professor Danilo Monarca
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Tel 0761 357364
DEIM administration office

The principal aim of this PhD course is to equip doctoral students with an interdisciplinary view of engineering issues associated with energy and environment, characterized by high technological development. PhD students will be engaged in training and research in the following sectors: technologies for thermonuclear fusion; conversion and accumulation processes of energy in all its various forms; environmental protection; innovations in the fields of mechanics and agrarian mechanics, sensor technology, bio-systems & agriculture.

PhD in **Ecology and sustainable management of natural resources**

Coordinator

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DEB administration office

The Doctorate in Ecology and Sustainable Management of Environmental Resources aims to train young professionals in the sector of ecological research, both basic, and applied to the sustainable use of natural resources and to environmental management. Students will acquire the skills needed to address the complex and multi-dimensional problems related to research activities, management and conservation in questions regarding the environment with interdisciplinary and multi-sectoral research approaches.

PhD in **Economics, Management and Quantitative Methods** External PhD programmes

Coordinator

Professor Alessandro Sorrentino
Department DEIM, DAFNE, DIBAF
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Teaching Aims

The PhD course offers a high-level training programme in economics, business and mathematics-statistics for graduates who can understand the challenges of current economics: the social and environmental sustainability of economic development and of the use of natural resources; changes in the consumer role, work, and markets as a consequence of innovation.

Director of the agro-food economy course of study

Professor Simone Severini
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The PhD maximises the knowledge of the professors in three areas: agro-food economy (specialised in the financial analysis of the agro-food system, its policies and its close connection with the global economic development at a global and local level); circular economy, which is collaborative and sustainable (specialised in the study of economy models and processes aimed at recycling and reuse, sustainability, ethics and inclusion); economy and government in the digital transformation of small and medium-sized enterprises (specialised in digital transformation analysis, in the new competences required and in the use of business data and support of decisional processes, quality control and marketing).

These three areas are based on an interdisciplinary programme on border economic and economic-business theories, in the common use of quantitative methods as a tool for analysis and the interpretation of functional data for research and studies of/solutions to financial, business and economic policies issues.

Career opportunities

The PhD aims at providing high-quality competences and specialisation to those who will work in leadership and managerial roles in public authorities or businesses and in research and teaching in universities and in other national and international institutions. As for job opportunities in the public and private sectors, PhD graduates will be able to:

- work as high-level analysts or directors and managers in production, marketing, quality and sales;
- help small and medium-sized companies develop the potential offered by data resulting from digital transformation and by the technologies creating them;
- plan and manage local and rural areas development, and support the development of the related economic policies;
- plan, evaluate and monitor investment projects.

First Level Master's Degree in Culture, Tradition and Innovation in Management of the Sports Horse

Coordinator

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This Master's Degree aims at training specialists in the management of sports horses and in companies based on its presence by providing interdisciplinary knowledge taking into account the evolution of current norms and regulations as well as the latest market needs. Training activities will factor in the new financial and management strategies of the development and promotion activities in the national horse industry following the changes in horse racing according to a semi-private management overseen by the Ministry for Agricultural Policies. This Master's Degree mainly aims at training professionals who are

capable of aptly managing the horses' genetic pool, of looking after the animals' well being and of promoting the management of the horse business. The Master's Degree is in line with DAFNE's training and research objectives, because the horse business is an agro-zootechnical sector of interest for different disciplines within the department, such as the cultivation of herbs, zootechnical science, mechanics for agriculture and rural constructions. The Master's Degree is open to horsemen with a FISE subscription at a competitive level who possess a first or second level degree in any type of degree course recognised by current regulations and to those who obtained a degree before D.M. 509/99 came into effect. The Master's Degree is open to candidates with a degree obtained abroad, as long as it is equivalent to the above-mentioned degrees. Students who are about to graduate can also enrol, as long as they obtain their degree before the start of the Master's Degree course. All EU and non-EU citizens with a degree can enrol, as long as they have a good knowledge of the Italian language (B2-C1 CEFR) and that their diploma is legally valid. Minimum number of enrolments in order for the course to start: 10. Maximum number of students: 15. If more than 15 students enrol, students will be selected based on their qualifications. The selection will take place at the Dafne department in October.

First Level Master's Degree in **Enogastronomy - Management, Enhancement and Promotion**

The aim of the master's degree course is:

- to prepare highly specialised professionals, with multidisciplinary skills, able to know, understand, evaluate and interpret with expertise the quality of enogastronomic products and activities, and to promote an efficient strategy of enhancement. Today, highly skilled professionals in this field are difficult to find in the current marketplace.
- The course aims to enable you to acquire the technical communicative tools with a view to creating an

Interdisciplinary Master's

DIBAF - DEIM - DAFNE -
DISUCOM - DEB

Headquarters

DIBAF

Coordinator

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awareness of the quality of foods, which is essential to successfully evaluate, enhance and/or manage a product.

The master's course will suit you, therefore, if you are interested in working or if you already operate within the agro-food, restaurant or services industries. It could also interest you if you want to follow a freelance career within these environments or if you want to take up a professional activity in the field of communication and in journalism specialising in tourism or enogastronomy.

The master's course is organized in three macro areas, divided into various modules, for a total of 60 CFU:

■ *Macro area 1*

Communication and advertising:

7 CFU

■ *Macro area 2*

Business, management and quality:

7 CFU

■ *Macro area 3*

Agro-food:

10 CFU

■ **Practical activities and workshops:**

10 CFU

■ **Visits to businesses, planning and analysis of case studies, communication and marketing:**

16 CFU

The programme offers students the possibility to study single modules, which could be useful if you want to improve specific business skills. This could interest you for professional or cultural reasons, or if you do not have the necessary entry qualifications for the course (three-year degree or equivalent), or if you do not wish to attend the entire course. Furthermore, it could give you the opportunity to strengthen technical or marketing skills or to better manage your own business. It is possible to enrol on single or multiple modular courses, without having to complete the whole master's study programme.

You can enrol on the master's degree course if you have a three-year degree in any subject in the field of humanities or science.

You will be granted the postgraduate degree of Master in Enogastronomy - Management, Enhancement and Promotion if you attend the lessons, pass the module exams and the final exam.

OFFICES AND STUDENT SERVICES

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Administrator

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Address

Dafne Academic Office

Via S. Camillo de Lellis snc

Administrator

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Library

Technical-scientific area

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Coordinator

Laura Tavoloni

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Opening Hours

From Monday to Friday 09:00 a.m. - 07:00 p.m.

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Administrator

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Incoming coordinator

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ACADEMIC CALENDAR

First semester

Lessons start:	24 September 2018
Lessons end:	21st December 2018
Christmas break:	from 22nd December 2018 to 6th January 2019

Second semester

Lessons start:	25 February 2019
Lesson end:	31th May 2019
Easter break:	19th-27th April 2019

Exam Sessions

Winter session

7th January 2019 – 22th February 2019

Summer session

3rd June 2019 – 2nd August 2019

Autumn session

26th August 2019 – 27th September 2019

Module exams and final exams

First semester

19th-23th November 2018

Second semester

15th-18th April 2019

USEFUL INFORMATION

DAFNE AND RESEARCH

The Department of Science and Technology for Agriculture, Forestry, Nature and Energy (www.dafne.unitus.it) is a teaching and research department that is nationally and internationally renowned for its numerous accomplishments in agricultural sciences, forestry sciences and agricultural biotechnology.

The research activities cover the complete range of agricultural and environmental sciences, forestry and natural sciences, agricultural biotechnology, and forestry and environmental conservation and restoration. Specifically, researchers and teaching staff operate in the following 10 research areas:

- Herbaceous and ornamental agro-ecosystems;
- Agricultural biotechnology;
- Molecular and environmental botany and landscape preservation;
- Agriculture, food, land and forest economics and politics, and accounting for agricultural assets.
- Agricultural and forestry engineering;
- Innovations in timber and fruit plantation, in nurseries and agroforestry genetics;
- Agroforestry pathology, entomology and microbiology;
- Land-use planning and management;
- Forestry planning and restoration;
- Livestock production science.

Although distinct in their specific fields of investigation and expertise, the research groups interact closely with one another to create a lively interdisciplinary environment.

HERBARIUM MUSEUM OF TUSCIA

Scientific Coordinator

Prof. Anna Scoppola

Contact

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www.erbario.unitus.it

The Herbarium of Tuscia is one of the three university herbariums in Lazio, which was added to the network of Viterbo City Museums and the University Museum System. It is located at DAFNE, in the basement of the ex Faculty of Agrarian Sciences.

It currently has 36,000 examples of dried plants and it boasts a library of over 150 volumes, a computerised archive, and specialised equipment for collecting, drying and mounting plants, plus equipment for the conservation and digitised archiving of scientific examples and those collected by students.

The Herbarium constitutes the register of plant species and the starting point for the verification of new specimens and critical identification of those already known. It is also the location for expertise, where academics come to exchange information, in addition to studying, viewing, acquiring or exchanging more significant findings. With its constantly increasing heritage and thanks to scientific research and excellent collections put together by students, the Herbarium promotes information on plant diversity and allows us to perceive the incredible richness and variety of plants, while gaining useful information about their growth habits. The Herbarium promotes traineeships, theses and other educational activities, including excursions and the collection of interesting species by botany students who have the opportunity to accumulate practical experiences.



DEPARTMENT STRUCTURE

Director Professor Nicola Lacetera

Deputy Director Professor Carla Ceoloni

Administrative Office Elena Capo

Academic Office Lorena Remondini

Department Council

Full Professors

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 **Note**

A series of horizontal dotted lines for writing notes.

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