

Natural Resources Management for Tropical Rural Development

Classe LM-69

President

He chairs the Council, convenes it in the manner provided in the University Didactic Regulations and supervises to the course activities.

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<http://www.tropicalruraldevelopment.unifi.it>

Organization chart

University tutor

Provides tutoring activities (teachers and researchers), information on training courses within the courses study, the operation of services and student benefits.

Prof. Graziano Ghinassi - graziano.ghinassi@unifi.it
Prof. Andrea Pardini - andrea.pardini@unifi.it

Teaching Committee

Review and approve curricula, review and approve student-related practices

Prof. Edgardo Giordani - edgardo.giordani@unifi.it
Prof. Caterina Contini - caterina.contini@unifi.it
Prof. Elena Bresci - elena.bresci@unifi.it
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Student Practices Delegate

Prof. Stefano Benedettelli - stefano.benedettelli@unifi.it

Internship Delegate

Prof. Enrico Palchetti - enrico.palchetti@unifi.it

Orientation Delegate

Prof. Francesco Garbati Pegna - francesco.garbati@unifi.it

Study Plan Delegate

Prof. Laura Mugnai - laura.mugnai@unifi.it
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Erasmus Delegate, Foreign Internship and Internationalization

Prof. Camilla Dibari - camilla.dibari@unifi.it

Student representatives

Elected for the 2019-21 biennium (elections of 09-10 April 2019)
Tayebeh Mohamaddhassanighiri
Samuele Pedrazzani

The Degree Course in English is aimed at achieving the Master's Degree in Natural resources management for tropical rural development. The two years course is structured in four didactic semesters. For the academic year 2019-20 the first and second year are activated of the Degree course in Natural resources management for tropical rural development – Class LM-69 according to DM 17/2010. The master's degree in Natural Resources Management for Tropical Rural Development can access the professional register of agronomists and forestry doctors and therefore can carry out freelance in Italy.

Course location

Educational Center of the Cascine.

Teaching regulations - Academic year 2019/2020

Specific educational objectives of the course

The didactic and research activities in the preparation of the final exam have it aim to provide the master's degree with a critical understanding of agricultural development problems in tropical and subtropical countries, as well as developing countries, and their scientific aspects. The master's degree must acquire the technical, scientific, cultural knowledge for the following purposes:

- a) Manage plant and tropical animal production; know the specificities of the systems production in emerging countries, especially in tropical environments; acquire methods for extend the specific knowledge learned to other production systems; analyze agricultural systems; plan interventions to increase and improve production and propose plan corrections.
- b) Analyzing economic processes in rural systems of emerging countries, with emphasis on tropical environments, including food production, food safety, marketing of agricultural products and access to credit, processes of international cooperation.
- c) Sustainably manage natural and human resources in development processes, with skills to analyze problems related to agriculture and breeding, and ability to identify and evaluate the effects of possible interventions.

The training course includes characterizing, integrative, monodisciplinary lessons. The number of exams is 12, included the acquisition of free credits. Each subject of the Master course includes lessons and exercises, the latter on average equal to 40% of the frontal teaching load. The activities courses are distributed in semesters. All courses are entirely in English, included lessons, teaching materials, exams.

The last semester of the second year is mainly intended for the preparation of the graduation thesis.

- First year: technical-scientific and cultural training of the agronomist who works in emerging countries, including qualifying knowledge for the class, knowledge related to the tropical and subtropical environment in general and safeguarding biodiversity, related knowledge to agricultural, forestry and animal production systems, and to the management of territorial resources in particular the management of water resources and the territory, all of them specifically oriented to the problems of developing countries and in particular with tropical climate.

- Second year: two separate curricula with completion of the characterizing training of the student.
Agricultural Production curriculum oriented towards food and agricultural production in general,
Land and Water curriculum oriented to the management of water and land resources.

- The second semester is mainly dedicated to the preparation of the graduation thesis. By using the free credits, the student will be able to increase his specific preparation in class-related or related-integrative sectors or even dedicate a greater commitment to a possible internship or to the preparation of the final paper. It is possible to foresee lessons taught at a distance using experimental methods which however, must take place in compliance with the methods provided by the didactic regulation of University, including e-learning forms. The final test for the achievement of the title and the relative verification consist in the presentation and discussion of an experimental thesis in English, in original form, under the guidance of an university speaker. The preparation of the experimental thesis includes a period of work in the field and / or in the laboratory, including preferably an experience in tropical developing countries. Foreign students will normally be admitted to perform their experiments in Italy. The preparation of the final exam (possibly increased by a part of the credits of student's own choice), constitutes a training moment integrated into the objectives of the course of study, such as to enhance the ability to apply knowledge and understanding, the autonomy of judgment and the communication skills. Expected learning outcomes are expressed through the Descriptors European qualifications (DM 16/03/2007, art. 3, comma 7).

Knowledge and understanding

The Master's Degree in Natural Resources Management for Tropical Rural Development trains an agronomist capable of operating in agricultural production and rural development in developing countries and particularly in tropical environments. The master's degree must acquire:

- the ability to critically understand technical, scientific and cultural problems in a broad sense, in rural environments of developing countries;
- the methodologies for evaluating agricultural production systems, including breeding and use of natural resources, in correct relationship with human resources;
- the ability to analyze local economic systems, with particular reference land tenure problems, access to the market and land management systems integration between different productions;
- knowledge of the management capacity of livestock systems and their ecological and productive peculiarities;
- knowledge of physiology and cultivation techniques of the main crops, particularly those for tropical areas;

- knowledge of crop protection, particularly in tropical environments.

Knowledge and understanding will be developed through lectures, exercises, including interdisciplinary, laboratory and field exercises, personal and group study on advanced texts and scientific publications. All frontal activities will be carried out in language English. The verification of the achievement of the training objective will be obtained with tests based on written or oral exams possibly with intermediate assessments also conducted with other methodologies (ongoing tests) aimed at detecting the performance of the class.

Ability to apply knowledge and understanding

The master's degree will enable students to:

- recognize and evaluate current trends, and participate in the definition of strategies for the sustainable production and management;
- acquire sustainable management skills of horticultural and animal husbandry systems, also and especially in vulnerable environments;
- develop the ability to evaluate the productive potential of systems, even the marginal ones, in supply chain terms;
- acquire the ability to identify field adversities, develop first interventions and organize appropriate strategies.

The ability to apply knowledge and understanding will essentially be developed with lectures, multidisciplinary exercises, laboratory and field activities, personal and group studies on advanced texts and scientific publications. The verification of the achievement of the training objective will be obtained with written or oral exams, with intermediate assessments (ongoing tests) intended to detect the progress of the class. Essential role will be played by the preparation of the final paper, which foresees the need for the student to apply his own training for concrete problems.

Making judgments

The master's degree must develop the ability to analyze rural systems, make proposals for improvement, plan and implement production development interventions, assess on site the progress of interventions already carried out and propose corrections. The graduated student will have to be able to handle independently the implementation of field projects, in particular, must be capable to operate or propose the technical adjustments necessary to adapt the theoretical project environmental, socio-economic and cultural reality. Autonomy of judgment will be developed through activities that require the student a personal and detailed commitment, such as production of individual written works, in single courses or for the final exam, as well as from the comparison of knowledge and ideas in interdisciplinary activities. Achieving the goal training will be demonstrated by passing the exams and the final exam. The preparation of the final exam will increase the autonomy of the student judgement.

Communication skills The course, entirely in English, has first of all the function to develop communication skills of the students, removing the diaphragms that hinder intercultural dialogue and thus leaving the agronomist free to deal with other communication problems. The verification of the achievement of this training objective will consist in the verification of the profit achieved by the student in the various exam tests, and in the presentation the final paper in front of the graduation commission. The relational skills gained during internships and traineeships will be monitored from the reports prepared by the students and evaluated in group discussions in the presence of the teachers of the subjects involved, coordinated by tutors appointed for this purpose.

Learning skills

The students will have to acquire the method to achieve its objectives in a broad range of environmental conditions, even unfamiliar and not expressly treated during the course of studies. They will need to be able to apply their knowledge by their own, starting from the acknowledgement of the reasons of diversity. They will also have to develop the ability to use communication tools to independently acquire the technical information necessary to adapt their work under conditions not foreseen and initially unknown. Achieving this goal will be verified through the profit achieved by the student in the various tests examination, and especially in the preparation and presentation of the final paper before the degree commission.

Requirements for access to study courses

In order to access this course, specific access criteria are established. Graduates of classes L-25 (D.M. 270) and 20 (D.M. 509), as well as graduates in Agricultural Sciences, Sciences Forestry and equivalent according to pre-existing regulations to the Ministerial Decree 509 with a degree at any university, can access to the master's degree course without the need for educational additions. Those students possessing another qualification in scientific disciplines, obtained in Italy or abroad and recognized as suitable can also access to

the course based on the examination of the supported exams. The Degree Program Council will establish case by case the number of exams recognized as valid between those already acquired and any curricular addition necessary to access to the master's degree course. It is however required to have obtained at least 6 exams taken in a suitable number (defined in the internal didactic Regulations of the study course) of the following scientific sectors disciplinary or equivalent training for degrees obtained abroad:

MAT / 02 ALGEBRA;
MAT / 05 MATHEMATICAL ANALYSIS;
FIS / 01 EXPERIMENTAL PHYSICS;
CHIM / 03 GENERAL CHEMISTRY;
CHIM / 06 ORGANIC CHEMISTRY;
BIO / 01 GENERAL BOTANICS;
BIO / 02 SYSTEMATIC BOTANICS;
BIO / 03 ENVIRONMENTAL AND APPLIED BOTANICS;
GEO / 04 PHYSICAL GEOGRAPHY AND GEOMORPHOLOGY;
AGR / 01 ECONOMY AND RURAL ESTIMATE;
AGR / 02 AGRONOMY AND HERBACEOUS CULTIVATIONS;
AGR / 03 GENERAL ARBORICULTURE AND ARBOREE CULTIVATIONS;
AGR / 04 HORTICULTURE;
AGR / 05 FORESTAL SETTLEMENT AND FORESTRY;
AGR / 06 TECHNOLOGIES AND FORESTRY USES;
AGR / 07 AGRICULTURAL GENETICS;
AGR / 08 AGRICULTURAL HYDRAULICS AND HYDRAULIC-FORESTRY SYSTEMS;
AGR / 09 AGRICULTURAL MECHANICS;
AGR / 10 RURAL BUILDINGS AND AGRO-FOREST TERRITORY;
AGR / 11 GENERAL AND APPLIED ENTOMOLOGY;
AGR / 12 VEGETAL PATHOLOGY;
AGR / 13 AGRICULTURAL CHEMISTRY;
AGR / 14 PEDOLOGY;
AGR / 16 AGRICULTURAL MICROBIOLOGY;
AGR / 17 GENERAL ZOOTECHNICS AND GENETIC IMPROVEMENT;
AGR / 18 NUTRITION AND ANIMAL FEED;
AGR / 19 SPECIAL ZOOTECHNICA;
AGR / 20 ZOOCULTURE;
SECS-P / 01 POLITICAL ECONOMY;
SECS P / 02 ECONOMIC POLICY;
SECS-P / 03 FINANCIAL SCIENCE;
UNIVERSITY OF FLORENCE STUDIES School of Agriculture
SECS-S / 03 ECONOMIC STATISTICS;
SECS-S / 04 DEMOGRAPHY;
SPS / 07 GENERAL SOCIOLOGY;
SPS / 08 SOCIOLOGY OF CULTURAL AND COMMUNICATIVE PROCESSES;
SPS / 09 SOCIOLOGY OF ECONOMIC PROCESSES AND WORK;
SPS / 10 SOCIOLOGY OF THE ENVIRONMENT AND TERRITORY;
IUS / 02 COMPARATIVE PRIVATE LAW;
IUS / 03 AGRICULTURAL LAW; scientific disciplines related to them.

Admission to the course and recognition of the qualification obtained in another Italian university or abroad, however, is subject to knowledge of the B2 level oral comprehension of English language.

Personal preparation

Access to the enrolment is subject to assessment of the level of preparation through the examination of the candidate's curriculum vitae and studiorum, the analysis of the results of exams taken and an individual interview. Students with a final career grade at least 27/30 are exempted from the individual interview.

Articulation of training activities and curricula

The course has a normal duration of 2 years: a first common year and second year with the possibility to choose between two "Agricultural production" or "Land and Water" curricula. Normal activity of the student corresponds to the achievement of 60 credits per year. The student that have, however, obtained 120 credits, fulfilling all the provisions of the Regulations of the Master of Science in Natural Resources Management for Tropical Rural Development, can obtain the title even before the two-year deadline. The requirement of differentiation from the other courses of study of class LM 69 must be at least of 30 CFU. 12 credits are chosen independently by the student. They can be acquired passing exams activated at the University of Florence,

other than those defined by these regulations and not acquired by the student within the three-year degree. In this regard, the student can count on the tutoring service to guide his choices. The credits reserved for the activities autonomously chosen by the student can also be acquired in the form of additional language skills in the Spanish, Portuguese and French languages through the acquisition of credits certified by the University.

Type of didactic forms, also at a distance, of exams and other verifications

The teaching activity will be carried out with lectures, laboratory and field exercises, seminars by specialists and ongoing tests. The teaching material will be made available in English at the beginning of every academic year, in digital form. The preparation will be integrated by readings, listening or viewing images (learning by being told) or through an active contribution from I work with answers to questionnaires, simulations, self-evaluation exercises (learning by doing). Furthermore, seminar texts of general or specific interest may be available online. Based on the experiences already consolidated in the CdS Tropical Rural Development compacted courses will be activated that allow to finish each course and take the exam in a few weeks. The verification of the individual achievement reached by the student and the consequent recognition of the credits of the various training activities are carried out with the following criteria and methods:

- a) for the courses taught, one or more ongoing tests and a final exam oral or written;
- b) for free choice activities and courses taught at other universities, in Italy or in foreign universities, certification of the structure where the activities were carried out;
- c) for any practical-application internship, certification of the Tutor of the internship on basis for submitting a written report. Internship activities are governed by appropriate University Regulations and take place under the guidance of a tutor specifically appointed.

The vote is expressed in thirtieths. The outcome of the evaluation of the profit of each course is considered positive, for the purpose of awarding credits, if the score of 18/30 is reached.

Methods for verifying knowledge of foreign languages

Language capacity achieved as autonomous choice credits and acquired in the form of additional language skills, will be attributed by certification of the University or other institutions recognized at international level.

Checking the other skills required, the results of the internships and placements

The internship consists in carrying out a practical application with private and public bodies and entities, operating in the agricultural, forestry and livestock sectors. Internship activities are regulated by specific University Regulations and take place under the guidance of a specifically tutor appointed by the President of the Degree Program Council or by his delegate. Credits provided for the internship are acquired with the certification of the complete performance of the activities foreseen in the internship project to be completed according to the methods provided by the School of Agricultural of the University of Florence. The credits foreseen for laboratory activities are acquired with the certificate of attendance to the laboratory issued by the responsible teacher, who must be formalized by the Degree Program Council, which may identify appropriate ones procedures and tests for part-time students.

Methods for verifying the results of study periods abroad and related ECTS

Once the requirements foreseen by the University Regulations for the organization of the activities have been satisfied for the management of the funds connected to the program of the European Community "Erasmus +", the teacher of reference of the training activity will approve the activity carried out abroad.

The approval is then formalized by the Master's Degree Course Board with the assignment of the relative score on the basis of a specific conversion table, available on the School at the address on the School website at www.agraria.unifi.it.

Attendance obligations and any preliminary requirements

Attendance at lessons is not mandatory even if strongly recommended.

Differentiated teaching methods for part-time students

The degree course provides for the possibility of enrolling students engaged at the same time in other activities. Tutoring services will be activated for these students and all the didactic material necessary to pass the verification tests foreseen for each course will be made available in English and in its original form at the beginning of each academic year, in digital form. Upon request, the teachers of the course will be available for tutoring and for consultation in compatible time slots with the needs of the part-time student. For the legislation governing part-time students refer to the University Educational Regulations.

Rules and methods of presentation of study plans

For the use of free credits, the student must present a study plan that will be submitted to the approval of the Degree Course. The study plan must be presented by the end of the first year, and in any case no later than December 31 of each year, and may be prepared with the assistance of a guardian. In cases of necessity and

urgency, adequately motivated, the student can submit a variation request to the approved study plan at least thirty days before submitting the thesis application to the secretariat students. The choice of the curriculum must be declared when registering.

Characteristics of the final test for the achievement of the title

To be admitted to the final test, all credits in the activities included in the study plan must be obtained, excluded those those foreseen for the final exam. The preparation of the final exam for the achievement of the qualification and the relative verification consist in the preparation, presentation and discussion of an experimental thesis developed in original form by the student under the guidance of a supervisor. The prepared paper will be presented in English and discussed in public before to a committee of teachers who will express an evaluation. The preparation of the experimental thesis includes a period of work in the field and / or in the laboratory, including preferably an experience in developing countries, with particular interest in those with tropical or subtropical climate, which must involve the acquisition of skills practices and relationships in a real work environment. The availability of structures or projects of experimentation and research to host graduating students is normally made known by the beginning of second year of studies. The didactic load for the preparation of the final exam is fixed in 27 ECTS, which can be increased by 9 ECTS according to the student's choice. The vote of the final exam is expressed in one hundred tenths with possible honours. The minimum score for the passing the final exam is 66/110. The final vote is identified by the student career, assessment of the quality of the final paper and discussion before the degree commission, as well as the time taken to achieve the graduation. In particular, the student who graduates within the two-year course will benefit from an additional score to that attributed on the basis of the other assessments. Honours will be awarded, with unanimous vote of the degree commission, only if the student has reached 110/110 and if he obtained the maximum score for the final paper.

Procedures and criteria for any transfers and for the recognition of training credits acquired in other courses of study and credits acquired by the student for skills and abilities adequately certified professionals and / or knowledge and skills gained in business post-secondary level training

Students enrolled in Degree Courses or University Diplomas of previous didactic systems, who intend to enrol in this course of study, will be able to obtain full or partial recognition of the credits accrued at the course of study of origin on the basis of tables of conversion prepared for this purpose. The same criteria will be followed to define the correspondence between the credits provided by the course of study and those acquired at other national and foreign university institutions and / or subjects outside the University, provided they are properly certified. Each case will be evaluated individually by the Degree Program Council. Training credits in the corresponding scientific disciplines up to a maximum number of CFU consistent with current legislation will be recognized to students in possession of suitably certified professional skills and abilities and / or abilities e knowledge gained in post-secondary training activities.

Tutoring services

The tutoring service, implemented as part of the Master's degree course, has the primary purpose to accompany the student during his / her study path (ongoing orientation) including didactic promotion for course students and public bodies and firms and private. Objectives of the service will also be to help students deal with and overcome any problems that may arise when participating in the course training of the Course. Finally, the service will take care of identifying objective and critical issues subjective of the Course, to report them to the CdLM and to check the smooth running of the Course.

Through the data collected, the service must:

1. provide information regarding the structure and educational, organizational activities, administrative and service services of the University, School and the Course;
2. assist the student in choosing the subject area in which to carry out the degree thesis, at in order to enhance their skills, attitudes and interests;
3. advise the student in the study activity, helping him / her to: develop the ability to organize, follow and correct a training itinerary; acquire a study method effective; addressing the difficulties inherent in understanding the training activities to be carried out along the course of studies.

To implement the tutoring service, the CdLM will proceed with:

1. the appointment of a tutor per course year;
2. checking the reference cohort (students enrolled in each year of the course) at least for the number of years of normal duration of the course;
3. the processing of data collection forms to be administered at defined intervals;
4. the control of students' career progression in terms of passing exams, mark obtained, year of course in which the exam was passed, etc. using data directly collected and / or provided by the University statistical service.

The orientation service of the course of study is articulated on three levels. 1) on entry: involves students enrolled in a three-year degree course for the choice of a master's course; 2) in itinere: accompanies the student during his / her course of study; 3) outgoing accompaniment: in agreement with the cohort tutors the graduating students are helped in the compilation of the c.v. according to the model European and addressed in the world of work. In the latter important case, the collaboration with the University offices of CsaVRI.

Transparency on procedures and decisions taken

The publication on procedures and decisions taken falls within the scope of transparency of acts of public administration and is of particular importance. The Course is committed to promptly inform the procedures taken by the various parties involved in the respective areas of interest. This timeliness will be achieved, also considering the indications provided by students, through communication via the Web or, in the case of small groups of students, through shortlisted e-mails (subject to authorization by the interested party to use your e-mail address). For timely information we will make use of special electronic bulletin board.

Quality assessment

The Degree Course adopts an internal quality assessment system consistent with the model approved by the Academic Bodies of the Florentine University. However the Course of Master's Degree aims to pursue quality objectives of the second educational path two general guidelines: 1. Quality in university education, through a system of quality assessment consistent with the model approved by the Academic Bodies; 2. Quality in administrative and support management processes, with the definition of precise and progressive objectives for improving the organizational system. The Course will keep constant relationships with interested parties (public bodies, private companies, etc.) through the Steering Committee; with students and their families through the Orientation Commission and secondary schools; with all the Commissions established within the Course, through the Executive Board of the Course. In addition, the Course will verify the correspondence with what is planned to verify the effectiveness of training, with methods and means managed by the evaluation of the teaching of the University, of the opinions of attending students on all courses and on the tests of verification, their internal publicity and their use for the improvement of teaching. The detection of the level of satisfaction of students with respect to individual courses is an obligation for all teachers of the Course and is performed for all the courses of the Master course.

Utilizzo dei Crediti liberi:

Sono previsti 12 CFU a scelta autonoma da parte dello studente.

Tale scelta è totalmente libera, sia pur nei limiti degli obiettivi formativi del corso di studio.

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Utilizzo di crediti liberi per la prova di lingua

Si consente agli studenti di utilizzare i crediti liberi, previsti dall'offerta formativa del Corso di Laurea, per sostenere un'ulteriore prova di lingua a scelta tra le seguenti:

Spagnolo (B013690)

Comprensione scritta al livello B2 di una

lingua a scelta 6

Portoghese (B013692)

Francese (B013686)

Tedesco (B013688)

Non saranno riconoscibili prove di lingua già svolte durante la laurea triennale.

Utilizzo dei crediti liberi per la partecipazione a attività con frequenza proficua come laboratori didattici e seminari e per attività utili all'inserimento nel mondo del lavoro:

È possibile utilizzare i crediti liberi, previsti dall'offerta formativa del Corso di Laurea per la partecipazione a attività con frequenza proficua come laboratori didattici e cicli di seminari proposti e approvati dal Corso di Laurea per 3 o 6 CFU, o sostenere un percorso formativo utile per l'inserimento nel mondo del lavoro fino a 6 CFU (3 o 6 CFU), denominato "ENHANCING SKILLS FOR PROFESSIONAL PRACTICE".

Use of free Credits

There are 12 ECTS to be chosen independently by the student. This choice is totally free, even if within the limits of the educational objectives of the course of study.

Use of free credits for the language test

Students are allowed to use the free credits provided for in the course's educational offer, to take an additional language test chosen from the following:

Language

Spanish (B013690)

Written comprehension at level B2 of one language of your choice

Portuguese (B013692)

French (B013686)

German (B013688)

Language tests already carried out during the three-year degree will not be recognized.

Use of free credits for participation in activities with profitable frequency such as educational workshops and seminars and for activities useful for entering the world of work

It is possible to use the free credits provided by the educational offer of the Degree Course for the participation in activities with profitable frequency such as educational workshops and seminar cycles proposed and approved by the Degree Course for 3 or 6 ECTS, or to support a useful educational path for entering the world of work up to 6 ECTS (3 or 6 ECTS), called "ENHANCING SKILLS FOR PROFESSIONAL PRACTICE".