



Rural Development

Organized by

Mediterranean Agronomic Institute of Montpellier

Rural Development

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Objectives

The Master of Science in "Rural Development and Projects" is a 15-months post-graduate training course designed for graduates, with or without professional experience, who are holders of a university degree equivalent to the French *Baccalauréat*+4yrs (*Maîtrise* or Engineer's degree) and have an initial training and/or professional experience in the field of rural development (agronomy/agriculture, economy, geography, rural sociology).

This Master aims at:

- providing training to engineers in charge of studies in territorial collectivities, organizations and institutions concerned with agricultural and rural development.
- teaching to economists and engineers the common language essential for team work.

It offers two options:

Option 1 : Rural development and projects

Option 2 : Farm and agricultural management and the environment

Option 1: Rural development and projects

This course aims at providing training in the field of rural development engineering to project managers or engineers in charge of development programmes and to those responsible for local development or in charge of studies. The recent evolutions of the rural world have indeed favoured the emergence of numerous structures and of rural and local development institutions which implement programmes and operations meant for the development and planning of rural territories. Actually, these structures look for highly qualified persons with expertise in rural development.

The training programme includes the use of theoretical and practical tools as well as the acquisition of professional experience (individual and collective training) allowing trainees to be in contact with local actors and field realities, but also to be immediately operational at the end of the course).

More exactly, this course allows to acquire:

- **knowledge**: analysis of the socio-economic functioning of a rural zone and of rural development process;
- **know-hows**:
 - . **how to make** a territory diagnosis, lead surveys, elaborate development programmes and operations, constitute files, carry out the economic and financial evaluation of a rural development operation;
 - . **how to behave** in multi-disciplinary working teams, how to act as interface between the technical and socio-economic aspects.

Option 2: Farm and agricultural management and the environment

In this course the management of agricultural production systems is addressed, taking into account both the economic and environmental approaches for engineers in charge of studies working for territorial collectivities, organizations and institutions concerned with agricultural development. With this aim, it includes the use of theoretical and practical tools as well as the acquisition of professional experience (individual and collective training) allowing trainees to be in contact with local actors and field realities but also to be immediately operational at the end of the course).

More precisely, this training programme provides:

- **knowledge:** analysis of the technico-economic functioning of a farm and of an agricultural region;
- **know-hows:**
 - . implementation of decision-making methods, preliminary analysis and strategic steering at consultancy stage carried out individually or collectively; elaboration of optimization models for technical and production choices at farm and regional levels; coupling biophysic and economic models for decision-making in the field of natural resources and diffuse pollution management in agriculture.
 - . **how to behave:** how to work in a multi-field team, how to make the interface between technical and socio-economic aspects.

The **first part** addresses the appropriate theoretical and practical methods and tools. Moreover, it allows trainees to be regularly put in real or professional situation: case studies, collective field studies, practicals.

The **second part** is dedicated to individual work and includes the realization of a 3-months training period in a firm and a thesis. The defence of the thesis before an appointed examining board leads to the Master of Science degree.

Part 1

Post-graduate specialisation course

This course is organized in 5 sections (60 ECTS)

- Prerequisites**
- Upgrade in economics and management (microeconomics, accounting, financial analysis and statistics)
 - Upgrade in computer use (Word, Excel, PowerPoint, Internet)
 - Introduction to documentary research

OPTIONS 1 & 2

Section 1

ANALYSIS OF THE RURAL DEVELOPMENT PROCESSES

Introduction to the use of theoretical and practical tools allowing to analyse rural development processes and reference situations within a given territory. The aim is to identify, on the basis of the analysis of the functioning: the advantages, the constraints as well as the potential of the territory to be enhanced.

Section 2

MARKETS, POLICIES AND NEGOTIATIONS

Main analytical questions concerning public choices, international markets and collective international negotiations. Case analysis and linkage between the three types of problems.

OPTION 1

Section 3

PROJECTS ELABORATION: SUSTAINABLE DEVELOPMENT AND RURAL DEVELOPMENT

Introduction to the methodology of projects elaboration, and/or of a development operation taking into account the sustainability aspects.

Section 4

FINANCIAL EVALUATION AND ECONOMIC EVALUATION OF PROJECTS

Introduction to follow-up techniques and financial and economic evaluation of rural development operations.

OPTION 2

Section 3

AGRICULTURAL ECONOMICS AND ENVIRONMENT

- course introducing to the methods and techniques for the economic diagnosis of farms management. Implementation of modelling techniques for decision-making in the field of technical choices and of production at farms level.
- use of biophysics modelling tools as decision-making tools in the field of natural resources management used in agriculture and the management of diffused pollution.

Section 4

ACTORS AND NATURAL RESOURCES MANAGEMENT

Analysis of the relationship between agriculture and the environment within the economic analysis, management practices and the implementation of environmental policies and of natural resources conservation.

OPTIONS 1 & 2

Section 5

PREPARATION OF THE TECHNICAL DOSSIER AND OF THE PROPOSAL FOR THE PROFESSIONAL TRAINING PERIOD IN A FIRM

- Preparation of the technical 'Dossier' centred on a topic connected with the professional training period.
- Preparation of a 'Dossier' presenting the different aspects of the individual professional training period.

TRAINING SEQUENCE

- Prerequisites**
(0 ECTS)
September
- Upgrade in economics and management
 - Upgrade in computer use
 - Introduction to documentary research

OPTIONS 1 & 2

- Section 1**
(12 ECTS)
October and
November
- ANALYSIS OF THE RURAL DEVELOPMENT PROCESSES**
- Introduction to the Mediterranean region
 - Economics for rural development (3 ECTS)
 - Prediagnosis and data analysis (3 ECTS)
 - Diagnosis analysis of a rural zone (6 ECTS)

- Section 2**
(6 ECTS)
December
- MARKETS, POLICIES AND NEGOTIATIONS (6 ECTS)**
- International markets of agricultural and food products
 - Agricultural, food, agro-environmental and rural development policies
 - International negotiations on agriculture and multilateral environmental agreements

OPTION 1

- Section 3**
(6 ECTS)
January
- PROJECTS ELABORATION: SUSTAINABLE DEVELOPMENT AND RURAL DEVELOPMENT**
- Elaboration of a rural development operation (3 ECTS)
 - Sustainable development and rural development (3 ECTS)

- Section 4**
(12 ECTS)
February and
March
- FINANCIAL EVALUATION AND ECONOMIC EVALUATION OF PROJECTS**
- Financial evaluation of a rural development operation (6 ECTS)
 - Economic evaluation of a rural development operation (6 ECTS)

OPTION 2

- Section 3**
(12 ECTS)
January &
February
- AGRICULTURAL ECONOMICS AND ENVIRONMENT**
- Farm management (6 ECTS)
 - Modelling and decision-making (6 ECTS)

- Section 4**
(6 ECTS)
March
- ACTORS AND NATURAL RESOURCES MANAGEMENT**
Actors and natural resources management (6 ECTS)

OPTIONS 1 & 2

- Section 5**
(24 ECTS)
April and May
- PREPARATION OF THE TECHNICAL DOSSIER AND OF THE PROPOSAL FOR THE PROFESSIONAL TRAINING PERIOD IN A FIRM**
- Preparation of an individual proposal (6 ECTS)
 - Preparation of the personal proposal for the professional training period (18 ECTS)

Detailed course description

Prerequisites

Economics and management

Reminder of fundamentals in microeconomics, management and statistics. Lectures and exercises.

Computer use

Presentation and exercises for the use of common software (Word, Excel, PowerPoint) and the Internet.

Introduction to documentary research, allowing the use of different documentary databases dealing with agricultural and rural development (CIHEAM-IAMM, Agropolis, CAB, FAO... databases).

OPTIONS 1 & 2

Section 1

ANALYSIS OF RURAL DEVELOPMENT PROCESSES

This analysis is carried out in two stages: problematic of rural development; introduction to the analysis of the rural milieu based on a diagnosis carried out on a given field.

This section is organized in three units, in addition to lectures introducing to the Mediterranean region.

Introduction to the Mediterranean region

Introduction to the Mediterranean region (characteristics). Lectures on the major stakes in this region (desertification, water management...) and on the various types of agricultures met.

Unit 1: Economics for rural development

Acquisition of the main tools allowing the analysis of a rural development process:

- Definition of the rural space,
- Spatial approach to development (per zone, territorial and regional development),
- Internal and external functioning of a production unit (reproduction Plan),
- Introduction to rural development problematics,
- Courses and collective reflection based on case studies.

Evaluation procedure: Classroom examination

Unit 2: Prediagnosis and data analysis

- This course shows the methods used for a quick diagnosis applied to a rural zone,
- Introduction to data analysis.

Evaluation procedure: Collective reports and classroom examination

Unit 3: Diagnosis analysis of a rural zone

This course deals with the diagnosis analysis of a rural area: how to analyse the area's functioning; how to highlight the local advantages and constraints and subsequently identify the elements allowing to elaborate a development strategy.

It introduces to the methodology for diagnoses and to the methods for carrying out surveys.

It includes real-life scenarios and applications through the diagnosis analysis of a Mediterranean rural area (in France):

- elaboration of a Questionnaire based on the problematics of the case studied,
- on-the-field training: socio-economic survey carried out among the actors and producers of the area studied,
- introduction to the use of the STATBOX software followed by the correction, capture and processing of the data obtained during the survey (group work),
- results analysis and interpretation,
- writing the thematic reports and oral rendering to the actors of the area of the results of the study.

Evaluation procedure: Written report and oral presentation.

Section 2

MARKETS, POLICIES AND NEGOTIATIONS

Markets, policies and negotiations

The objective is to provide basic knowledge and capacity for critical analysis regarding the three aspects of political economy concerning the agricultural issue *stricto sensu*. This course includes lectures, case analyses, group work and a simulation game on an agricultural negotiation. Courses serving as a link between the three sections ensure the problematic continuity of these three fundamental parts of public policies.

This course is thus structured around three parts.

1) The 1st part deals with “markets”

Based on the case analysis of two large markets of agricultural produce (wheat, fruit and vegetables), the course develops the main analytical problems concerning the analysis and regulation of international markets: competition and competitiveness, segmentation, protection, oligopoly and oligopsony effects.

2) The second part deals with “policies”

Based on a thorough analysis of the common agricultural policy and European mechanisms concerning rural development, this part also takes as counterpoint an agricultural policy in a Mediterranean third country. Special attention is paid to environmental questions and their incidence on public choices in rural, agricultural and food concerns.

3) The third part deals with “negotiations”

Based on the analysis of WTO and its different bodies functioning, this part proposes a simulation game on negotiation around the constitution of positions about particular ‘Dossiers’ elaborated during group work.

Evaluation procedure: Classroom examination and ‘Dossiers’ elaborated during group work.

OPTION 1

Section 3

PROJECTS ELABORATION: SUSTAINABLE DEVELOPMENT AND RURAL DEVELOPMENT

Unit 1: Elaboration of a rural development operation

This course concerns the use of the diagnosis analysis for elaborating a rural development strategy and rural development projects.

It allows the acquisition of tools for projects elaboration and introduces to projects cycle management (European method of projects elaboration):

- analysis of the context,
- construction of the logical tree and of the actors’ graph,
- construction of the logical frame.

Application, through elaboration carried out collectively, of a development project.

Evaluation procedure: Classroom examination and oral presentation

Unit 2: Sustainable development and rural development

Critical analysis of the sustainable development concept, of its origins (the socio-economic and ecological context of its emergence), of its various definitions and dimensions. The sustainable development concept and the economic theory.

Presentation of the "patrimonial management" method: theoretical introduction and application through role-plays.

Analysis of the specificity of the application of the sustainable development concept within the rural development framework.

Analysis of the sustainable development problematic in various types of ecosystems (wet, dry and semi-arid areas, forest areas): theoretical presentation and case studies.

Evaluation procedure: Classroom examination

Section 4

FINANCIAL EVALUATION AND ECONOMIC EVALUATION OF PROJECTS

Unit 1: Financial evaluation of a rural development operation

This course allows:

- the acquisition of the various concepts and methods of financial evaluation for a development operation (profitability, taking into account inflation and risks, financing mechanisms...);
- the use of these methods through data processing: introduction to the EVALPRO software;
- Computer-based applications.

Evaluation procedure: Classroom examination

Unit 2: Economic evaluation of a rural development operation

This course allows:

- the various concepts and methods for the economic assessment of a development operation (costs-advantage analysis, valuation methods, methods of effects, policies evaluation);
- the methods of projects follow-up and evaluation and application through two case studies.

Evaluation procedure: Classroom examination

OPTION 2

Section 3

AGRICULTURAL ECONOMICS AND ENVIRONMENT

Unit 1: Farm management

This course allows to:

- master farm management techniques through the use of computer techniques (technico-economic follow-up at production level, labor organization, management of finances, budgets, farms accounting);
- elaborate a strategic development plan for a given farming enterprise through the use of a multi-periodic simulator (OLYMPE); and write a report of the management committee;
- experience of a real-life situation on-the-field with farmers and responsible professionals.

Evaluation procedure: 'Dossier' on the basis of the report of a firm management committee (resulting from group work); oral presentation; classroom examination.

Unit 2: Modelling and decision-making

This course addresses:

- Farm modelling at decision-making level.
- Simulation and optimization models.
- Examples of modelling: formulation and resolution of an optimization model at farm level. Analysis of the results, interpretation and limits.
- Risk-taking modelling: different methods.
- Comparing the main biophysics simulation models.
- The CROPSYST model: vegetable-like growth modules, water, nitrates, salt, erosion.
- Construction of production functions.

Evaluation procedure: 'Dossier' presenting individual or group work.
Individual classroom written examination.

Section 4

ACTORS AND NATURAL RESOURCES MANAGEMENT

Actors and natural resources management

- Environmental and natural resources economics. Tools in the field of environmental policy: definition and implementation, taxes, quotas.
- Analysis of the interaction between individual and collective choices at regional level.
- Multi-agents systems : theoretical concepts and applications.
- Reactive and cognitive agents, coordination among agents.
- The transition from farm-size models to aggregated regional models.
- Case studies: basic structure of a regional model, formulation, functioning, data coherence, models validation.
- Use of regional simulation models for negotiation.
- Simulation game for negotiations and assessing collective choices in a small agricultural region.

Evaluation procedure: 'Dossier' presenting individual or group work.
Individual classroom written examination.

OPTIONS 1 & 2

Section 5

PREPARATION OF THE TECHNICAL DOSSIER AND OF THE PROPOSAL FOR THE INDIVIDUAL TRAINING PERIOD IN A FIRM

Written technical dossier on a subject connected with the professional training period proposed (theoretical work).

Written proposal for the professional training period presenting: the *Training Order*, the area to be studied, the context, the methodology, the work schedule. This written proposal is to be defended before an examining board consisting of IAMM teachers.

Part 2

The Master of Science course

Professional training period in a firm, thesis and its defence (6 months, 60 ECTS)

This includes :

- an individual professional training period of 3 months minimum within a structure involved in rural development (research departments, local governments, ministries, NGOs, international bodies...). Work in connection with rural development engineering: diagnosis of a rural area, projects elaboration or evaluation, socio-economic study (10 ECTS);
- a thesis connected with the professional training period presenting the context, the theoretical frame, the methodology, the results; the defence of the above thesis before a jury of teachers-researchers and professionals (50 ECTS).

Indicative Master theses already achieved in “Rural development”

Titre : Microfinance et ONG : bilan et analyse diagnostic du fonctionnement du dispositif de microcrédit à l'ONG algérienne Touiza en vue de la création d'une institution de microfinance (2007)

Auteur : BOUDEDJA Karima (Algérie)

Directeurs de thèse : Tahani ABDELHAKIM et Omar BESSAOUD

Titre : Un jeu de simulation pour l'aide à la décision en agriculture : application au cas de la Communauté de Lomagne (Tarn et Garonne) (2005)

Auteur : BOUZIDI Wahiba (Tunisie)

Directeur de thèse : Philippe LE GRUSSE

Titre : Modèles de simulation de l'agriculture d'un bassin versant, application au bassin Aveyron-lère (2004)

Auteur : CARMONA Gema (Espagne)

Directeur de thèse : Philippe LE GRUSSE

Titre : Étude des possibilités d'activation d'un SYAL et de ses impacts sur le développement rural de la région Mixteque (Mexique) (2007)

Auteur : COTO SAURAS Maria (Espagne)

Directeur de thèse : Tahani ABDELHAKIM

Titre : Association de développement et dynamiques territoriales au Maroc (2005)

Auteur : ELLOUAZIRI Hafida (Maroc)

Directeur de thèse : Tahani ABDELHAKIM

Titre : Détermination des pratiques et des conduites des agriculteurs pour la sauvegarde de l'outarde canepetière dans le cas de la plaine de Niord (2006)

Auteur : HACHEROUF Hichem (Algérie)

Directeur de thèse : Philippe LE GRUSSE

Titre : Essai d'évaluation de la formation en approches participatives dans le cadre du projet de développement des zones montagneuses de El-Haouz au Maroc (2005)

Auteur : HAFID Tarik (Maroc)

Directeur de thèse : Omar BESSAOUD

Titre : La perception du rôle des parcs nationaux et naturels par les acteurs locaux dans le développement de l'espace rural en Bulgarie (2006)

Auteur : MICHELET ZAGORSKA Genoveva (Bulgarie)

Directeur de thèse : Tahani ABDELHAKIM

Titre : La dynamique du développement local dans les zones rurales tunisiennes : l'exemple du projet « Jessour et Ksour de Béni Khedache » (2007)

Auteur : MOUSSALIM Sanaa (Maroc)

Directeur de thèse : Pierre CAMPAGNE

Titre : Modèle de fonctionnement hydro-agricole d'un bassin versant : le bassin versant du ZIZ à l'aval du barrage Hassan Addakhil – Oasis du Tafilalet (Maroc) (2007)

Auteur : OUBRAHIM Abderrahim

Directeur de thèse : Philippe LE GRUSSE

Titre : Pluriactivité, logiques familiales et durabilité des systèmes de production agricole. Analyse diagnostic des systèmes d'activités dans la zone de Intersalar, Altiplano Bolivien (2007)

Auteur : PARNAUDEAU Jérémie (France)

Directeur de thèse : Pierre CAMPAGNE

Titre : Diagnostic des systèmes de production cacaoyers dans une vallée productrice de coca : l'Alto Huallaga au Pérou (2007)

Auteur : REY DE ARCE María (Espagne)

Directeur de thèse : Philippe LE GRUSSE

Titre : Modélisation d'une région agricole pour simuler l'application de la réforme de la PAC. Application au cas de la Communauté de Communes de la Lomagne Tarn et Garonnaise. (2005)

Auteur : RUCHETON Gabrielle (France)

Directeur de thèse : Philippe LE GRUSSE

Titre : Pour une meilleure maîtrise des charges de mécanisation des exploitations agricoles – Applications en Lomagne Tarn et Garonnaise (2006)

Auteur : SOUISSI Fakhri (Tunisie)

Directeur de thèse : Philippe LE GRUSSE

ACADEMIC STAFF WITHIN THE MASTER OF SCIENCE “RURAL DEVELOPMENT”

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