



CIHEAM

International Centre for Advanced  
Mediterranean Agronomic Studies  
Mediterranean Agronomic Institute of Zaragoza



Universitat de Lleida

## International Master in

# INTEGRATED PLANNING FOR RURAL DEVELOPMENT AND ENVIRONMENTAL MANAGEMENT (26<sup>th</sup> edition)

Zaragoza (Spain), 26 September 2016 – 9 June 2017  
September 2017 – June 2018

## 1. Objectives

The use of rural space and the management of natural resources in Mediterranean countries cannot be carried out by merely extrapolating options developed in other ecological systems. The proposals and solutions adopted in each situation ought to be based on an individualized analysis of the natural, economic and social components at stake and should contemplate the dynamic functioning of the system adopted. This means that professionals must be able to take a global and integrating approach to resources and furthermore, be aware of the basics, the possibilities and the limits that modern resource assessment techniques and information management offer to the decision maker.

The Master is designed to provide participants with knowledge on the characteristics of different rural and natural Mediterranean ecosystems and with an understanding of the basic problems of resources management and rural development through a systems approach. Rural planning problems are considered within the context of the present regional, national and international socio-economic frameworks.

The Master enables the participants to:

- Become acquainted with the bases that govern the behaviour of systems and their corresponding physical, socio-economic, legal and institutional sub-systems.
- Gain expertise in the methods and techniques that can be applied in the different stages of a rural planning project.
- Propose alternative land uses under different conditions and assess the viability and appropriateness of their application.
- Acquire experience in the elaboration of planning projects through case study analysis and original works carried out by participants.
- Develop the skills to work in a multidisciplinary team.
- Be introduced into research, critically applying acquired knowledge, capacities and abilities to the treatment of real problems related to the development and environmental management of rural areas.

## 2. Organization

The Master is organized by the Mediterranean Agronomic Institute of Zaragoza (IAMZ) of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) and the University of Lleida (UdL). It is included in the official postgraduate programme “Natural Environment and Forestry Management” of the University of Lleida, being an official Master of the Spanish university system within the framework of the European Space for Higher Education.

The Master is developed over two academic years on a full time basis [120 credits, following the European Credit Transfer System (ECTS)] and is structured in two parts.

The first part of the Master (60 ECTS) is professionally oriented and comprises lectures, practicals, tutored personal and group work and technical visits. This part will take place at the IAMZ from 26 September 2016 to 9 June 2017, and will be given by well qualified lecturers from universities, research centres, administration services and private companies in different countries.

The second part of the Master (60 ECTS) constitutes a period of initiation to research in which participants work on the Master of Science Thesis. This part will begin from September 2017 onwards and will last for 10 months during which research work will be conducted followed by elaboration of the thesis that must be publicly defended and approved by an examining board.

Participants may, if they wish, complete only the first part of the Master, that constitutes a postgraduate specialization course.

## 3. Diplomas

CIHEAM will award the **Postgraduate Specialization Diploma** to those participants who have passed the necessary examinations and have obtained 60 ECTS taking the full first part of the Master. The University of Lleida could consider credits obtained in this first part to continue studies in the framework of its official postgraduate programme.

Participants who passed the first part of the Master may, once an experimental protocol has been presented, complete the second part to obtain the **Master Degree**. The official Spanish degree will be awarded by the University of Lleida and CIHEAM will award its Master of Science degree.

## 4. Academic organization

The first part of the Master is held in three terms, with morning and afternoon sessions. This part is made up of complementary but independent units so that participants may attend, if they wish, only one or several units. Point 9 shows credits awarded to each.

This part requires personal work and interaction among participants and with lecturers, its international characteristics favouring the exchange of experiences and points of view. Formal lectures are complemented with case studies, tutorials, field and computer practicals, individual exercises, group work and technical visits.

Throughout this first part, participants form multidisciplinary groups and carry out an integrated planning project on a previously



chosen area. The objective of the work is to provide participants with practical experience on how to design and implement a planning project of a particular area. Carrying out this work enables participants to: (i) gain practice in information retrieval and its selective treatment; (ii) learn to define and integrate the different components that interact in a system; (iii) apply the principles and methodology presented throughout the units in each of the work phases; (iv) acquire experience in the analysis of situations and in decision-making; (v) develop the skills for group work and multidisciplinary collaboration; and (vi) acquire experience in the preparation of oral communications and their presentation in public. During the second part of the Master, participants complete 60 ECTS focused on the introduction to research and on the elaboration of a Thesis based on the results of an original research work, once the candidate has prepared an experimental protocol submitted under the supervision of the thesis tutor. Only those participants that have obtained an average score of 70 over 100 or more in the first part of the Master may opt for second part scholarships awarded by IAMZ. The experimental work for the elaboration of the thesis will be carried out in institutions collaborating with CIHEAM and the University of Lleida or in the University of Lleida, particularly at the Escola Tècnica Superior d'Enginyeria Agrària, for a period of approximately 10 months, under the direction of a tutor who should be a doctor of renowned experience.

The Master's website (<http://masters.iamz.ciheam.org/en/integratedplanning>) offers detailed information about the different aspects of the programme.

## 5. Admission

The first part of the Master is designed for a maximum of 25 participants complying with the following conditions:

- University degree, preferably in agronomy, forest sciences, biology, geography, environmental sciences, economics and landscape architecture.
- Sound user-knowledge of computers. Experience in using geographical information systems (GIS) will be taken into consideration.
- Knowledge of Spanish which will be the working language. Given the diverse nationalities of the teaching staff, simultaneous interpretation into Spanish will be provided. However, knowledge of English will be considered in the selection of candidates, since part of the bibliographical material may be distributed in this language. The IAMZ organizes an intensive Spanish language course starting in July for those who require it.

## 6. Registration

Application forms may be obtained from:

**Instituto Agronómico Mediterráneo de Zaragoza**  
 Avenida de Montañana 1005, 50059 Zaragoza (Spain)  
 Tel.: +34 976 716000 - Fax: +34 976 716001  
 e-mail: [iamz@iamz.ciheam.org](mailto:iamz@iamz.ciheam.org)  
 Web: [www.iamz.ciheam.org](http://www.iamz.ciheam.org)

Candidates should send the completed application form to the above address accompanied by:

- *Curriculum vitae*, stating university degree, experience and professional activities
- Transcript of records
- Certificates of language knowledge
- Reasons for applying to the Master

The deadline for the submission of applications from non-Spanish candidates is 4 May 2016.

The first deadline for the submission of applications from Spanish candidates and European candidates with knowledge of Spanish is 30 June 2016. Candidatures presented by this deadline will have preference. The second deadline will be 12 September 2016.

Applications from those candidates who cannot present their complete records when applying, or those requiring authorization, may be accepted provisionally.

Registration fees for each academic year of the Master amount to 2900\* euro. This sum covers tuition fees only. For candidates wishing to partially attend the first part of the Master, the fees will be calculated on a *pro rata* basis.

(\* This price is indicative and may vary when official prices for credits of Master postgraduate programmes are determined at the UdL.

## 7. Scholarships

Candidates of any nationality may apply for full or partial registration fee scholarships.

Candidates from CIHEAM member countries (Albania, Algeria, Egypt, France, Greece, Italy, Lebanon, Malta, Morocco, Portugal, Spain, Tunisia and Turkey) may also apply for scholarships covering the cost of travel and full board accommodation in the Hall of Residence on the Aula Dei Campus. Candidates from other countries who require financial support should apply directly to other national or international institutions.

## 8. Insurance

It is compulsory for participants to have medical insurance valid for Spain. Proof of insurance cover must be given at the beginning of the Master. For participants under 28 years of age, insurance is included in the registration fees. Furthermore, those who so wish may participate in a collective insurance policy taken out by the IAMZ, upon payment of the stipulated sum.

## 9. Structure and contents of the first part of the Master

- PLANNING FOR SUSTAINABLE RURAL DEVELOPMENT (4 ECTS)
  - 1.1. Dynamics of rural areas. New driving forces for rural development: comparative approach
  - 1.2. Planning a complex world: the systems approach. Spatial and temporal scales
  - 1.3. Rural planning methodologies and procedures
- INTERPRETATION AND EVALUATION OF NATURAL RESOURCES: MULTISCALE INTERACTION
  - 2.1. Natural resources (5 ECTS)
    - 2.1.1. Climate, water, soil and vegetation: characterization and functions
    - 2.1.2. Interaction of natural system elements at different scales
  - 2.2. Natural and agricultural production systems (7 ECTS)
    - 2.2.1. Landscape dynamics
    - 2.2.2. Components and processes of natural and agricultural production systems: biodiversity, productivity, water and nutrient cycles, systems recovery
    - 2.2.3. Conservation of species and protection of areas
- ECONOMY AND SOCIAL STRUCTURES
  - 3.1. Environmental economics and policies (6 ECTS)
    - 3.1.1. Introduction to markets
    - 3.1.2. Basic elements of regional economics
    - 3.1.3. Introduction to cost-benefit analysis
    - 3.1.4. The economics of natural resources and environmental economics
    - 3.1.5. Economic evaluation of planning projects
    - 3.1.6. Environmental legislation
  - 3.2. Socioeconomics of rural areas and development policies (5 ECTS)
    - 3.2.1. Social and economic structures in rural areas
      - 3.2.1.1. Methodologies for socioeconomic analysis in rural areas: sources of data, census, indicators, survey planning and demographic processes
      - 3.2.1.2. Social and economic transformations in rural areas within the context of globalization
      - 3.2.1.3. Social participation and local development in rural areas
    - 3.2.2. Rural economics and policies for integrated rural development
      - 3.2.2.1. Rural development and agricultural policies in the European Union and in the Mediterranean region

- 3.2.2.2. Leader projects
- 3.2.2.3. Rural tourism
- 4. CRITERIA AND TECHNIQUES FOR PLANNING DEVELOPMENT
  - 4.1. Spatial and socioeconomic analysis (9 ECTS)
    - 4.1.1. Cartography analysis for rural planning
    - 4.1.2. Geographic information systems and digital database management
    - 4.1.3. Introduction to remote sensing and its application to natural resource management
  - 4.1.4. Socioeconomic statistical analysis
- 4.2. Land use allocation and modelling (9 ECTS)
  - 4.2.1. Land use allocation and environmental impact analysis
  - 4.2.2. Qualitative modelling, scenarios and system dynamics modelling
  - 4.2.3. Decision support systems and integrated spatial modelling
- 5. INTEGRATED PLANNING PROJECT (15 ECTS)

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## LECTURERS PARTICIPATING IN THE 2014-15 EDITION OF THE FIRST PART OF THE MASTER

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|---|---|
| E. AKSOY, ETC-Univ. Málaga (Spain)  | D. GÓMEZ OREA, Univ. Politécnica Madrid (Spain)         |
| R. ALBAJES, UdL-Agrotecnio, Lleida (Spain)  | A.J. GORRIA, ECAS, Zaragoza (Spain)                     |
| A. ALEDO, Univ. Alicante (Spain)  | J.P. GUERREIRO, Univ. Algarve, Faro (Portugal)          |
| J. ÁLVARO, CSIC-EEAD, Zaragoza (Spain)  | A. HEREDIA, SARGA-GA, Zaragoza (Spain)                  |
| F. ARBUÉS, Univ. Zaragoza (Spain)   | A. JULIÁN, Univ. Zaragoza (Spain)                       |
| T. ARENTZE, Technical Univ. Eindhoven (the Netherlands)                           | M.J. MANCEBÓN, Univ. Zaragoza (Spain)                   |
| E. BANDRÉS, Univ. Zaragoza (Spain)  | J. MARTÍN-VIDE, Univ. Barcelona (Spain)                 |
| F.O. BAPTISTA, Univ. Técnica Lisboa (Portugal)                                    | E. MOLIN, Univ. of Technology, Delft (the Netherlands)  |
| B. BARRETT, Univ. College Cork (Ireland)  | R. MONTORIO, Univ. Zaragoza (Spain)                     |
| J. BELLOT, Univ. Alicante (Spain)   | O. MORENO, Univ. Politécnica Valencia (Spain)           |
| R. BREY, Univ. Pablo Olavide, Sevilla (Spain)                                     | J.M. NICOLAU, Univ. Zaragoza, Huesca (Spain)            |
| L. CABELLO, ESTEYCO, Madrid (Spain)   | J. OLONA, QUASAR Consultores, Zaragoza (Spain)          |
| C. CANTERO, UdL-Agrotecnio, Lleida (Spain)  | D. ORTIZ, Univ. Politécnica Valencia (Spain)            |
| F. CAWKWELL, Univ. College Cork (Ireland)   | A. PERIS, IAE-GA, Zaragoza (Spain)                      |
| F. CEÑA, Univ. Córdoba (Spain)  | E. PLAYÁN, CSIC-EEAD, Zaragoza (Spain)                  |
| M.A. CEÑAL, DENDROS S.L., Madrid (Spain)  | A. PUEYO, Univ. Zaragoza (Spain)                        |
| T. COMA, Prímula Asesores, Zaragoza (Spain)                                       | F. RODÀ, Univ. Autònoma Barcelona (Spain)               |
| J.M. DE JUAN, KOAN Consulting S.L., Madrid (Spain)                                | D. RONDEAU, Univ. Victoria (Canada)                     |
| A. DíEZ-TICIO, Univ. Zaragoza (Spain)   | M. RÓZPIDE, TYPSA, Madrid (Spain)                       |
| G. ENGELEN, VITO NV – Flemish Institute for Technological Research, Mol (Belgium) | E. RUIZ, Univ. Zaragoza (Spain)                         |
| A. ESCUDERO, Univ. Rey Juan Carlos, Móstoles (Spain)                              | S. SABATÈ, Univ. Barcelona (Spain)                      |
| P. FÁBREGAS, CEDER Somontano, Barbastro (Spain)                                   | F. SANTIVERI, UdL-Agrotecnio, Lleida (Spain)            |
| R. FANLO, UdL-Agrotecnio, Lleida (Spain)  | B. SETUAIN, Univ. Zaragoza (Spain)                      |
| J. GALCERAN, UdL-Agrotecnio, Lleida (Spain)                                       | G. SLAFER, ICREA-UdL-Agrotecnio, Lleida (Spain)         |
| F. GARCÍA PASCUAL, Univ. Lleida (Spain)   | R. VALLEJO, Univ. Barcelona (Spain)                     |
| J.M. GARCÍA RUÍZ, CSIC-IPE, Zaragoza (Spain)                                      | W. VAN DEURSEN, PCRASTER, Rotterdam (the Netherlands)   |
| L. GARROTE, Univ. Politécnica Madrid (Spain)                                      | M. VAN LIESHOUT, PANTOPICON, Antwerp (Belgium)          |
| G. GLARÍA, Univ. Politécnica Madrid (Spain)                                       | C. VAN MOLDER, PANTOPICON, Antwerp (Belgium)            |
|   | J.C. VERDEJO, Univ. Puerto Rico, San Juan (Puerto Rico) |
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See updated information at

<http://masters.iamz.ciheam.org/en/integratedplanning>



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