10 Reasons for studying this Master

1. Animal nutrition is one of the main bases of livestock production, therefore specialist training is required to produce safe, quality food products and design sustainable production systems.

2. An innovative programme providing in-depth knowledge of nutrition systems for cattle, sheep, pigs, goats, poultry and rabbits through analysis of modern and sustainable techniques and methods.

3. A multidisciplinary programme delivered by 81 highly qualified professionals from 9 countries, chosen for their expertise and reputation.

4. A comprehensive teaching system combining lectures, practicals, individual tutored work and visits to livestock farms, businesses and research centres.

5. A professional traineeship at a firm in the agro-food production or animal nutrition sector, a livestock farm or a public institution.

6. The Final Master Project of the second year is conducted at a national or international university, research centre or firm.

7. 92% of alumni from recent editions are already working in fields related to the Master or preparing a doctoral thesis.

8. An opportunity to build up an international network of contacts and collaborators, an essential factor of differentiation in today’s competitive job market.

9. Double official qualifications awarded by the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) and the University of Zaragoza (UZ).

10. The Master is accredited by the Aragon Agency of Quality Assurance (ACPUA).
About Us

IAMZ-CIHEAM
The Mediterranean Agronomic Institute of Zaragoza (IAMZ) is one of the four Institutes of the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM), together with the Institutes of Bari in Italy, Montpellier in France and Chania in Greece.

CIHEAM is an intergovernmental organization founded over 50 years ago under the aegis of the Council of Europe and the OECD whose mission is to develop cooperation between the countries of the Mediterranean through postgraduate training and cooperative research in the agro-food and fisheries sectors and the environment.

IAMZ was created in 1969, offering high-quality training and promoting research and international cooperation through project management in five thematic areas: Animal Production; Fisheries and Aquaculture; the Environment; Plant Production; and Food Technology and Agro-Food Marketing.

The Mediterranean Agronomic Institute of Zaragoza has become consolidated as a leader in international specialist training in the agro-food sector. It is situated on the Campus of Aula Dei, one of the largest and most prestigious agricultural science complexes in Spain, thus enhancing the generation of synergies within the scientific community, business and students.

UNIVERSITY OF ZARAGOZA (UZ)
The university dates back over four centuries and has more than 35,000 students and 3500 lecturers each year, making it a university of national and international reference thanks to its reputation in research and quality service.

The Faculty of Veterinary Science was founded in 1847 and is one of the oldest in Spain. Its modern infrastructures stand in its own 8-hectare campus. Undergraduate degrees in Veterinary Science and Food Science and Technology are offered, as well as official Master degrees and three Doctorate programmes, two of which are related to agriculture and food science.

THE SPANISH FOUNDATION FOR THE DEVELOPMENT OF ANIMAL NUTRITION (FEDNA)
The Spanish Foundation for the Development of Animal Nutrition (FEDNA) is a non-profit education centre created in 1989. The mission of FEDNA is to publicize the latest scientific advances in animal nutrition and feeding throughout Spain and strengthen ties between University and Business through the exchange of information services and the integration of students in firms of the animal nutrition sector. The Foundation also draws up Spanish feed composition tables and awards the FEDNA prize for young researchers.
Organization

The Master in Animal Nutrition is an official master of two years’ duration (120 ECTS), delivered in Zaragoza and jointly organized by IAMZ-CIHEAM, the University of Zaragoza (UZ) and the Spanish Foundation for the Development of Animal Nutrition (FEDNA), with the collaboration of the Polytechnic University of Madrid (UPM).

Scientific Coordinator
Dr. Manuel Fondevila
University of Zaragoza
Dept. Animal Production and Food Science.

Academic Coordinator
Dr. Armando Occón
IAMZ-CIHEAM

The Master is designed to train professionals in the field of animal nutrition. During the first year (60 ECTS) students attend lectures and tutorials, laboratory and IT practicals to learn to design animal feed programmes and participate in technical visits to various livestock farms.

During this time students have the opportunity to design a project on new techniques or methodologies in animal nutrition and apply them in a productive context.

The Master is flexible and students can take independent modules.

Lectures are delivered in English, French or Spanish with simultaneous interpretation. Furthermore, for students that do not have a basic knowledge of Spanish the UZ delivers an intensive Spanish language course to help them adapt to the IAMZ experience. The course takes place from July to September, and includes a month in the Pyrenean city of Jaca.

The Master includes at least 13 technical visits to: compound feed mills, forage shrub plots and pastures, beef and dairy cattle farms, meat and dairy sheep farms, extensive and intensive systems, goat farms, an organic production system, poultry, pig and rabbit farms and milk recording and quality control laboratories.

Year One

Principles of animal nutrition
10 ECTS

Animal feeding and food quality and safety
15 ECTS

Repercussions of nutrition on the environment and on animal health and welfare
6 ECTS

Individual project
7 ECTS

Year two

Introduction to Research
30 ECTS

Final Master Project
30 ECTS

Livestock feed and feed manufacture technology: composition, quality and safety
10 ECTS

Mathematical methods and statistics in animal nutrition
5 ECTS

Professional traineeship related to animal nutrition
7 ECTS

Programme

At least 13 technical visits

Year one

September 2017

Year two

May 2018

June 2018

Programme http://www.masteranimalnutrition.com
The Master leads students to reach the following objectives:

1. To become acquainted with the scientific principles and fundamental mechanisms of modern animal nutrition, as well as the relevant methods and techniques that contribute to more efficient processes.

2. To learn how to bring together the different components of an animal nutrition programme for sustainable production and safe, quality foods of animal origin.

3. To be capable of planning and implementing animal nutrition programmes in different conditions and surroundings.

4. To know how to design a nutrition programme for a chosen specie, applied to a given production system and local conditions.

5. To commence research work, and critically apply the knowledge, skills and competences acquired to deal with real issues related to animal nutrition.

6. To master the scientific and technical information related to the research, acquire skills in the use of relevant research techniques and methodologies and be capable of making an objective assessment of the significance of results and conclusions.

7. To acquire the necessary skills to transmit the reasons and conclusions of tutored individual or group work to prepare informative or synthesis documents and present oral communications.

«The traineeship experience has been a very important aspect for me and without a doubt has completed my academic training. It has enabled me to apply the knowledge acquired during the course and prepared me to overcome challenges I may face in my professional career.»

Rebeca Oliver, 2016 (Spain)
Year Two

In year two of the programme (60 ECTS) students go on to do their Practicum and Final Master Project at national or international universities, research centres or firms. The collaboration with these institutions is fundamental for the success of the programme.

Students receive training in an environment of team research work, and benefit from excellent resources and sound advice. The experience acquired during this period goes beyond the acquisition of knowledge and practical skills. It provides a full introduction to the reality of the professional world.

Partner Centres

Final Master Projects

Fadhila Akli Frendi (Algeria):
«Economic analysis and efficiency of Assaf and Awassi dairy sheep farms in Castilla y León, Spain»
2007-2008 edition

Manel Ben Khedim (Tunisia):
«Modelling the feed intake of dry and lactating Manchega and Lacaune ewes»
2007-2008 edition

Candelaria Ferrer Somaré (Argentina):
«Effect of the soybean oil level on the intake and digestion of steers fed sorghum silage»
2010-2011 edition

Myriam Taghouti (Tunisia):
«Relationship between body condition, reproductive system and reproductive traits in rabbits: Practical application of the bioelectric impedance method»
2010-2011 edition

Carolina Pineda Quiroga (Colombia):
«Evaluation of parameters of rumen fermentation and methane emissions in representative rations of different dairy sheep production systems in the Autonomous Community of the Basque Country»
2012-2013 edition

Laia Biavi Josa (Spain):
«Maternal learning and creep-feeding: two strategies determining post-weaning performance of piglets»
2012-2013 edition

Mohammed Amine Hachemi (Algeria):
«Effect of feeding on meat quality in PGI “Carne de Avilés” beef cattle»
2014-2015 edition

Neus Torrent Ample (Spain):
«Effect of barley β-glucan supplementation on milk production and digestive and metabolic parameters in dairy ewes»
2014-2015 edition

Prize for the best Final Master Project of the University of Zaragoza
Career Opportunities

The Master in Animal Nutrition offers students a versatile range of career opportunities as the specialist nature of the degree qualifies students to assume technical responsibilities as well as conduct scientific research in the following domains:

- The compound feed, additive and biotechnology industries.
- Livestock farms, planning and supervising animal nutrition.
- Technical advisory services for farms, cooperatives and industries.
- Institutions and public administrations.

Alumni employment since the 2007 edition

The IAMZ Experience

Student testimonials

Neus Torrent
(Spain) 2013-2015 edition
Prize for the best Final Master Project of the University of Zaragoza. Technical expert at the animal nutrition firm TECNOVIT (Spain)

«For me, participating in the Animal Nutrition Master of IAMZ and UZ has meant a great step forward in my professional career. Totally recommendable for lovers of animal production.»

Mohammed Ben Bati
(Morocco) 2009-2011 edition
Researcher at INRA (Morocco)

«My participation in this Master has allowed me to consolidate my knowledge in the field of animal nutrition and address different aspects of production, especially end product quality. I have also been able to establish relations with other research and teaching centres and improve my knowledge of foreign languages. Therefore, I encourage everyone, professionals and scientists alike, wishing to pursue a career in animal nutrition, to apply to this Master.»

Sebastián Doti
(Uruguay) 2009-2011 edition
Livestock firm advisor (Uruguay)

«For a Latin American this is an opportunity not only to receive training in a top-level academic environment but also to travel to other parts of the world, live new experiences and bring back what we have learnt to help produce more efficiently whilst optimizing resources and respecting the environment.»

Soufiane Hanzaoui
(Algeria) 2007-2009 edition
Lecturer at the University of Bouira (Algeria)

«This experience has taught me to learn what is needed in animal nutrition. It has been a great satisfaction for me and I am grateful for what I have learnt on the course and thank both organization and lecturers.»

The course includes several new developments in animal science; these are relevant to the continuous evolution of animal nutrition as a relevant discipline. Such developments include precision livestock farming, the environmental impact of livestock systems and the impact of nutrition on the health and welfare of livestock. I teach Immuno nutrition, which is a cutting edge topic as it brings together new knowledge of assessing animal health with the developments in the way we feed and manage livestock. This should enable students of the course to deal with the challenge of managing animals not only for their productivity but also their health and welfare.

Feed is the single greatest expense in producing milk and nutrition has a major impact on cow health and well-being. The topics covered in my section will provide students with the tools needed to understand the links between nutrition and cow health and how to formulate cost-effective and health-promoting diets for dairy cows.

By-products and crop residues are valuable and affordable animal feed sources in the Mediterranean zone. They are often neglected or under-utilized. The corresponding chapter at the IAMZ Master on Animal Nutrition covers their nutritional characteristics and highlights the opportunities for valorizing them in the context of livestock production systems in the region.
Access, admission and scholarships

Dates and duration

Part One of the Master is held from 25 September 2017 to 1 June 2018.
Part Two will commence in September 2018 with a duration of 10 months.

Selection process

The IAMZ-CIHEAM/UZ Studies Commission is composed of representatives of the organizing institutions. Selection of candidates is based on the documents submitted upon application.

Admission and deadlines

Apply online at:
http://www.admission.iamz.ciheam.org

The application deadlines are the following:

Non-Spanish candidates:
1 February to 4 May 2017.

Spanish candidates or candidates with knowledge of Spanish *:
1 February to 15 September 2017.

* Non-European candidates should take note of the visa procedure deadlines.

Registration and scholarships

Registration fees are 2900* euro per academic year.

Candidates from CIHEAM member countries may apply for a scholarship to cover registration fees, travel and full-board accommodation in the Hall of Residence on the Campus de Aula Dei.

Candidates of any nationality may apply for a grant to cover all or part of the registration fees.

(*) The fees are for guidance only and may vary once the official fees of Master Programmes at the UZ have been determined.

Spain is the 5th largest economy in the European Union and the 13th in the world in nominal terms. Spain is the 3rd most popular tourist destination in the world.

Spain: Leading country in the agro-food sector

Spain is the 8th largest exporter of agro-food products in the world.

Spain has the largest surface area of vineyards in the world.

Spain is the largest producer of olive oil.

Spain is the 2nd largest pork producer in the EU and 4th largest in the world.

60% of the irrigated surface area of Europe is in Spain.

Spain is the largest producer of olive oil.

Spain is leader in aquaculture production in the EU.

Spain is one of the top commercial fruit and vegetable operators.

The largest area of protected crops in Europe is in Almeria.
Zaragoza, two thousand years of history in a Mediterranean country: Spain

The gastronomy offer is unlimited: Enjoy the famous tapas in El Tubo in Zaragoza or a tasty Thursday evening with the Juepincho.

Practise your sport of choice in Zaragoza or take a weekend trip to the Aragonese Pyrenees.

A dynamic city with a wide cultural offer and a rich and varied architecture dating back 2000 years.

Soak up the energy and good atmosphere of the extravert Spanish personality and sense of humour.

Take advantage of the Mediterranean climate. Spain is the European country with the most days of sunshine!

A strategic location for travel to other parts of Spain and Europe.

Open, welcoming and cosmopolitan, Zaragoza also ranks high on the Global City Talent Competitiveness Index.