

Official master's degree

# Official master's degree in Zoonoses and One Health

Training multidisciplinary health professionals ready to handle the highly complex challenges of the 21st century

**REGISTRATION NOW OPEN FOR THE 6th INTAKE  
LIMITED TO 25 PLACES**



FACULTAT DE VETERINÀRIA



Master's Degree in  
ZOO NOSES and  
ONE HEALTH

**UAB**

Universitat Autònoma  
de Barcelona



Master's Degree in  
ZONONOSES and  
ONE HEALTH

Training professionals ready to handle the new biological challenges of this 21st century



Coordination: Departament Sanitat i Anatomia Animal  
Veterinary School, UAB

Coordination:

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Master's Degree in  
ZONOSSES and  
ONE HEALTH

# One Health approach



The Master's Degree in Zoonosis and One Health is a professionally oriented programme that responds to a need for professionals with a well-rounded, multidisciplinary training encompassing **human, animal and environmental health**, who can work effectively and collaboratively on the prevention, control, management and communication of biological hazards and threats.

The Master will serve to train up highly qualified professionals to work in both the public and the private sector, with a multidisciplinary vision of One Health, in line with the requirements of the major international health bodies, like the World Health Organisation (WHO), the United Nations Food and Agriculture Organisation (FAO) and the World Organisation for Animal Health (OIE).



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ZONOSSES and  
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# Master schedule

The master's degree in Zoonosis and One Health comprises 60 ECTS credits, is taught over one year divided into two semesters, and consists of six compulsory modules, five of which are content modules and the sixth is that of the master's dissertation.



MODULES	Language	ECTS
<b>M1. One Health: Introduction, Health Policy and Epidemiological and statistical methods</b> (Oct- ½ Nov)	ENGLISH	12
<b>M2. Methodologies Applied to the Multidisciplinary Environment of One Health</b> (½ Nov – ½ Dic)	ENGLISH	9
<b>*M3. Multidisciplinary One Health approach in major and endemic zoonosis</b> (Jan – Feb)	ENGLISH	9
<b>*M4. Multidisciplinary One Health approach in emergent zoonosis and in especial contexts</b> (Feb – Mar) (HIV, low-income countries, health emergencies, bio-threats)	ENGLISH	9
<b>*M5. Multidisciplinary One Health approach in Food Safety and Security</b> (Apr-May)	ENGLISH	6
<b>M6. Master Research Dissertation</b> (Feb – Jul)	ENGLISH/ SPANISH	15

*1<sup>o</sup> semester*

*2<sup>o</sup> semester*

\*M3, M4 and M5: Modules taught jointly with the Erasmus Mundus Joint Master's Degree in Infectious Diseases and One Health (EMJMD-IDOH).



## MODULES

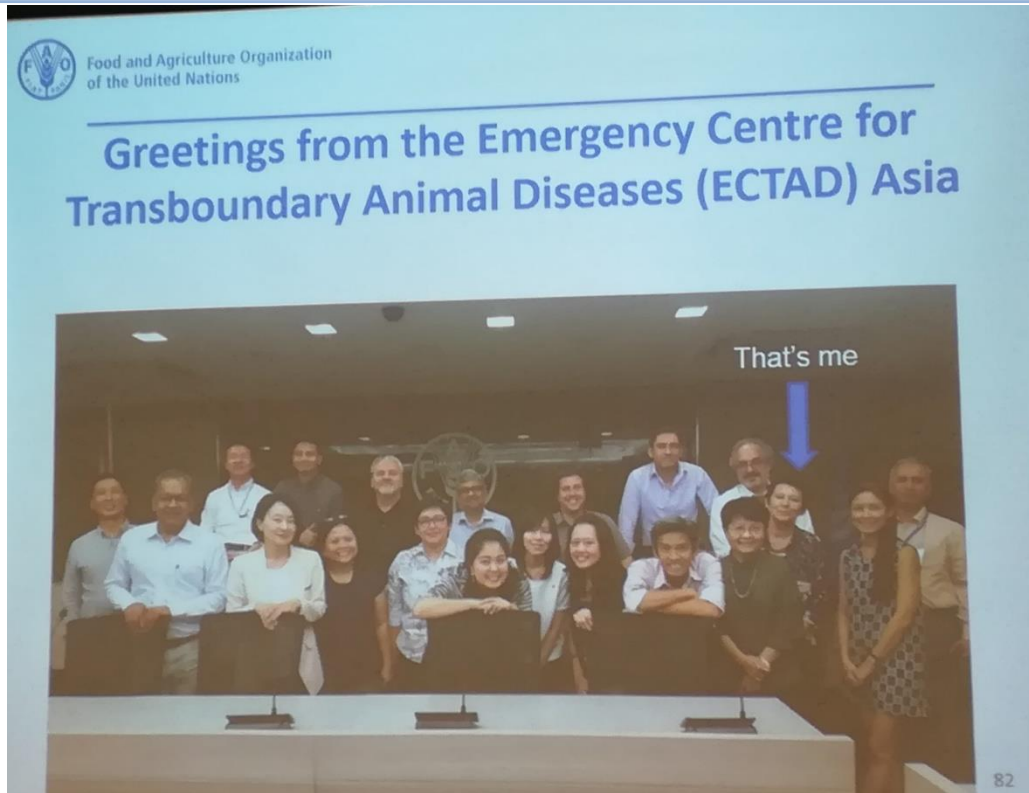
## Contents

### M1. One Health: Introduction, Health Policy and Epidemiological and statistical methods

- Introduction to the One Health concept
- Agencies and Institutions involved.
- Basic and Advanced Statistics
- Basic epidemiological concepts.
- Epidemiological surveillance and Risk assessment.
- Geographic information Systems (GIS).
- Study of outbreaks
- Public Health research projects



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS



## MODULES

### **M2. Methodologies Applied to the Multidisciplinary Environment of One Health**

## Contents

- Environmental Health and toxicology
- Ecology and Wildlife.
- Health economics.
- Sociological studies
- Practical cases of the One Health approach.
- Workshop in laboratory diagnosis





## MODULES

### M3. Multidisciplinary One Health approach in major and endemic zoonosis



## Contents

- Major viral zoonosis (Rabies, CoV, flu A, ...)
- Bacterial zoonosis (TBC, brucellosis, rickettsiosis...)
- Parasitic and fungal zoonosis (Leishmania, toxoplasma, cestodes, ...).
- Antimicrobial resistance (AMR) and alternatives
- Communicative skills in Health Alerts.
- Lab practices: microbiology, micology, serology.
- Workshop: Virology and molecular diagnosis.





## MODULES

### **M4. Multidisciplinary One Health approach in emergent zoonosis and in especial contexts**

## Contents

- Introduction of exotic and emergent zoonoses
- Vector borne infection diseases
- Emergent viral, bacterial and parasitic zoonoses
- Immunocompromised patients (HIV)
- Risk assessment/management in low income countries.
- Health emergencies workshop and Refugees camp
- Bio-threats and biosafety
- Lab external visits: Laboratory of Biosecurity level 3 at CReSA. Lab of clinical analyses at the Vall d'Hebron Hospital.



## MODULES

## Contents

### M5. Multidisciplinary One Health approach in Food Safety and Security

- Food Safety and Security
- Evolution of food borne zoonosis.
- Principal Food borne bacteria, parasites, viruses, prions, mycotoxins and biotoxins.
- Nutritional crisis
- Computer work: Risk assessment in food safety
- Lab practices in Food safety





## MODULES

## Contents

### M6. Master Research Project (Internship)

Research proposals from UAB departments and the associate partners



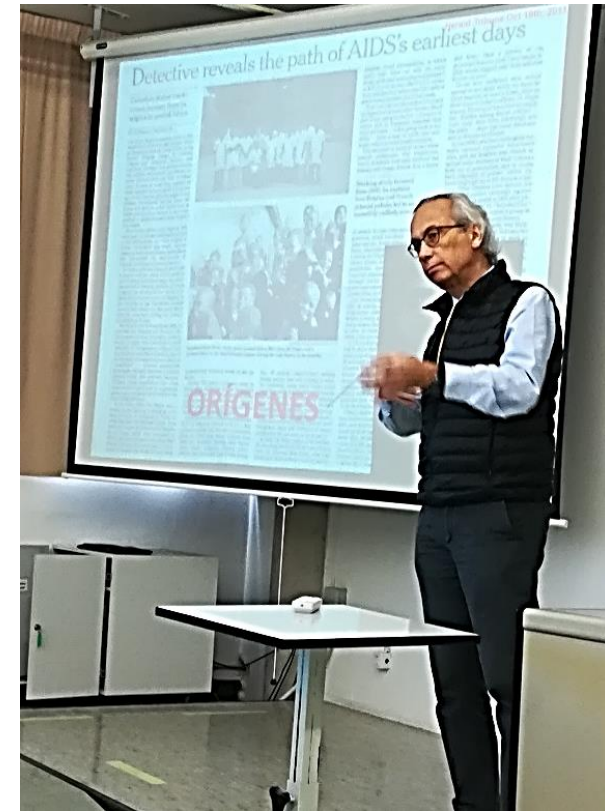




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# Teaching staff

More than **120 PROFESSIONALS** coming from INTERNATIONAL HEALTH INSTITUTIONS AND AGENCIES, RESEARCH CENTERS, HOSPITALS AND UNIVERSITIES





## UAB-associated Departments and Hospitals

Dp. Animal Health and Anatomy

Dp. Animal and Food Science

Dp. Animal Medicine and Surgery

Dp. Animal Biology, Vegetal Biology and Ecology

Dp. Genetics and Microbiology

Dp. Mathematics

Dp. Medicine

Dp. Medicine and Legal/forensic psychiatry

Dp. Pharmacology, therapeutics and toxicology

Dp. Pediatrics, Obstetrics and Gynecology and Preventive Medicine

Dp. Sociology

Hospital de la Vall d'Hebron, Barcelona

Hospital de la Santa Creu i Sant Pau, Barcelona

Hospital Germans Trias i Pujol, Badalona

Hospital ParcTaulí, Sabadell

## Associate partners



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Agencia Catalana de Seguridad Alimentaria (ACSA)

Agencia de Salud Pública de Barcelona (ASPB)

Agencia de Salud Pública de Cataluña (ASPC)

Departament d'Agricultura, Ramaderia, Pesca, Alimentació i Medi Natural, GenCat (DARP)

Ministerio de Agricultura, Alimentación y Medio Ambiente (MAGRAMA)

Centre d'Estudis Epidemiològics sobre les ITS i la Sida de Catalunya (CEEISCAT)

Institut Català d'Oncologia (ICO)

Centre de Recerca en Sanitat Animal (CReSA-IRTA)

Centre for Research in Environmental Epidemiology (CREAL)- ISGlobal

Cuerpo policial: TEDAX-mossos esquadra (CBRN Unit, EOD-IEDD-CBRN Area)

Cooperativa Humanitaria (non-profit cooperative society)

European Centre for Disease Prevention and Control (ECDC)

European Commission's Directorate General for Health and Consumer Protection (DG SANCO)

European Food Safety Authority (EFSA)

Food and Agriculture Organization of the United Nations (FAO)

World Organisation for Animal Health (OIE)

Hospital Clínic de Barcelona

Hospital de Vic

Hospital Universitari de Bellvitge

Unitat de Salut Internacional Vall d'Hebron-Drassanes (PROSICS)



## Associate partners

Institut de Recerca de la SIDA-AIDS- IRSICaixa Foundation  
Institut de Recerca Germans Trias i Pujol  
Instituto de Investigación en Recursos Cinegéticos (IREC)  
Institut de Recerca I Tecnologia Agroalimentàries (IRTA)  
Instituto de Salud Carlos III de Madrid  
Institut de Salut Global-ISGlobal  
Organizaciones no gubernamentales (ONGs)  
Pan American Health Organization (PAHO)  
Servei de Control de Mosquits - Consell Comarcal del Baix Llobregat

Universidad de Alicante  
Universitat de Barcelona  
Universidad de Castilla la Mancha- Facultad de Medicina  
Universidad Complutense de Madrid  
Universidad de Córdoba  
Universitat de Girona  
Universidad de Navarra  
Universitat Rovira i Virgili de Tarragona  
Universidad de Zaragoza  
University of London, The Royal Veterinary College (UK)



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## OUR STUDENTS:

INTERNATIONAL PROFESSIONALS  
OF DIFFERENT DISCIPLINES:  
VETERINARY, MEDICINE,  
MICROBIOLOGY, BIOMEDICINE,  
BIOTECH, BIOCHEMISTRY, FOOD  
SCIENCE, PHARMACY, INFECTIOUS  
DISEASES, BIOLOGY, ZOOLOGY,  
GENETICS, IMMUNOLOGY ...





# INNOVATIVE LEARNING









# Career options

Students can go on to pursue careers in any of the following areas.

**1) Risk assessment in general for any sector included in the programme** (public, human, animal, plant and environmental health), including monitoring of critical flowchart points for illnesses, in:

**Private companies** (food, pharmaceuticals, hospitals, veterinary medicine, phytosanitary products)

**Research Centres** into public health, animal health or environmental health.

**2) Risk management in advisory and consultancy services** for policies on detection, surveillance and control of diseases in:

**Government bodies** at regional, national or international level.

**Non-government, non-profit organisations** (NGOs) and private healthcare organisations.

**3) Research in the field of health and access to PhD studies.**



## COORDINATION STAFF

M1. One Health: Introduction, Health Policy and Epidemiological and statistical methods.

Dr. Alberto Allepuz

M2. Methodologies Applied to the Multidisciplinary Environment of One Health.

Dr. Alberto Allepuz

M3. Multidisciplinary Application of One Health in Major and Endemic Zoonoses.

Dr. Marga Martin

M4. Multidisciplinary Application of One Health in Emerging Zoonoses and in Special Situations. Dr. Laila Darwich

M5. Multidisciplinary Application of One Health in Food-Borne Zoonoses and Food Safety and Security. Dr. Artur X. Roig

M6. Master's Degree Dissertation. Dr. Francesc Accensi

**All classes are taken at the Vet School UAB**

Official languages: English(100%)

Calendar: October 2021 to September 2022