UAB
Universitat Autònoma de Barcelona

Multidisciplinary Application of One Health in Emerging Zoonoses or in Special Situations

Code: 43758
ECTS Credits: 9

2025/2026

Degree	Type	Year
Zoonoses and One Health	OB	0

Contact

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

As a requirement for admission you must have one of the Degrees listed below:

Graduate, Bachelor or Diploma in the field of Health Sciences (Veterinary Science, Medicine, Nursing, Pharmacy, Science and Food Technology, Animal Science and Health, Biomedicine, Psychology) or Life Sciences (Biology, Biochemistry, Biotechnology, Zoology, Botany, Ecology, Biodiversity, Environmental Sciences, Agronomic Engineering, Forestry) or equivalent

Objectives and Contextualisation

The objectives of this module will be focused on:

- Entomology bases and epidemiological status and risk assessment of emergent arboviruses and other new viruses and parasitosis.

- Principal zoonosis in immunosuppressed populations.

- Risk assessment, management and communication of zoonosis in situations of Public Health Alerts, bio treats and in low/income countries.

Competences

- Act in accordance with the code of ethics of the profession.
- Communicate and justify conclusions clearly and unambiguously to both specialist and non-specialist audiences.
- Continue the learning process, to a large extent autonomously.
- Describe and interpret the dynamics of emerging zoonoses and their interfaces human-wildlife wild-animal-vector-environment.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.

- Manage and report on the risk of zoonoses in special situations, health emergencies or biological threats.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Work alone or in a multidisciplinary team within the area of study, showing critical reasoning and creativity, and the ability to analyse, interpret and synthesise the data generated.

Learning Outcomes

1. Assess the risk of zoonosis transmission in movements of people between countries.
2. Assess the risk of zoonosis transmission in the cross-border transport of animals, plants and their derivatives.
3. Comply with the profession's code of practice in special political, economic, social and cultural contexts (health emergencies, low-income countries or immunosuppressed populations).
4. Determine the most suitable healthcare intervention in accordance with the social, economic and environmental context in which it is to be developed or applied.
5. Evaluate the effect of climate change on the redistribution of new diseases.
6. Foresee and control the risk of contracting a zoonosis.
7. Formulate the most suitable control measures to minimise risk from emerging or exotic zoonoses in developed countries.
8. Formulate the most suitable control measures to minimise the risk of zoonoses in health emergencies or biological threats.
9. Formulate the most suitable control measures to minimise the risk of zoonoses in immunosuppressed populations.
10. Formulate the most suitable control measures to minimise the risk of zoonoses in low-income countries.
11. Know the importance of vectors as transmitters of diseases between continents and at all levels: humans-animals-plants-environment.
12. Obtain suitable bibliographic information to make risk assessments for emerging or exotic zoonoses.
13. Perform critical analyses of emerging zoonosis risk situations or in special situations, solve problems and make decisions.
14. Present and communicate surveillance or control plans for emerging or exotic zoonoses or in special situations.
15. Rapidly establish efficient containment protocols to face biological threats and alerts.
16. Resolve formulated cases by working independently.
17. Understand the special conditions that arise in patients with a weakened immune system.
18. Work alone or in a multidisciplinary team within the area of study, showing critical reasoning and creativity, and the ability to analyse, interpret and synthesise the data generated.

Content

- Introduction of exotic and emergent zoonoses
- Vector borne infection diseases

- Antimicrobial Resistance

- Emergent viral, bacterial and parasitic zoonoses
- Regulation of global trade and Border Inspection Points
- Zoonoses in Low income regions
- Zoonoses in immunocompromised population
- Health Emergencies (sanitary, humanitarian crisis)
- Biological Hazard management (BSL3-CReSA)

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures, seminars, practices and lab visits	78	3.12	2, 1, 17, 11, 15, 14, 12, 7, 8, 10, 9, 6, 13, 5, 18, 4
Type: Supervised			
Case resolution tutorials	30	1.2	3, 2, 1, 15, 14, 12, 7, 8, 10, 9, 6, 13, 16, 18, 4
Type: Autonomous			
Teamwork and self-learning	117	4.68	2, 1, 17, 11, 15, 12, 7, 8, 10, 9, 6, 13, 5, 16, 4

Presencial Activities:
Lectures
Seminars
Lab practices
External visits
Supervised activities:
Tutorials
Teamwork debates
Autonomous work:
Teamwork meetings for deliverables preparation
Self-learning study

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Classrom activities /Lab reports	25%	0	0	2, 1, 17, 11, 15, 6, 5, 16, 18, 4
Self-learning activities and teamwork and oral exposition	35%	0	0	3, 2, 1, 17, 11, 15, 14, 12, 7, 8, 10, 9, 6, 13, 5, 16, 18, 4
Test exam	40%	0	0	3, 2, 1, 17, 11, 15, 14, 12, 7, 8, 10, 9, 6, 13, 5, 16, 18, 4

ASSESSMENT CRITERIA FOR THE MASTER MODULES

A. The assessment of the students will be done through a combination of the following criteria:

-It is mandatory to attend at least 80% of the presential classes. Attendance to lectures and participation in the activities carried out individually or in groups during those sessions will be recorded. Non justified absences for a given activity are not accepted. In case of a justified absence (illness, work issues, etc.) the qualification of this activity will be considered but restrictions may apply.

- Attendance and participation in the laboratory practical lectures. All activities and exercises will be assessed. The acquisition of laboratory skills and competences will be assessed as well.

- Self-learning, teamwork and oral presentation. The assessment will take into account the quality and clarity of the presentation and the knowledge demonstrated during the discussion of the subject.

- Synthesis exam. It will include questions on all the topics covered throughout the module. A minimum mark of 4/10 is required to be able to average with the rest of the grades.

B. To pass this module, compulsory attendance is required at a minimum of 80% of the on-site class hours of the module.

The final average grade of the module must be equal to or greater than 5 out of 10.

C. In the case of failing the exam, the students will have an additional opportunity consisting in a synthesis exam.

Evaluation weights

Classroom activities /Lab reports 25%

Teamwork and oral expositions 35%

Test exam 40%

Bibliography

-Libro digital del World Bank : People, Pathogens and Our Planet (Volume 1: Towards a One Health Approach for Controlling Zoonotic Diseases) Link:

http://siteresources.worldbank.org/INTARD/Resources/PPP_Web.pdf

-Revista digital de la OIE: Rev. sci. tech. Off. int. Epiz., 2014, 33 (2), 569-581. Emerging zoonotic viral diseases. Link:

http://www.oie.int/doc/ged/D14089.PDF

Software

Use of AI: In thismodule, the use of Artificial Intelligence (AI) technologies is allowed as an integral part of the development of the work, provided that the final result reflects a significant contribution of the student in the analysis and personal reflection. The student must clearly identify which parts have been generated with this technology, specify the tools used and include a critical reflection on how these have influenced the process and the final result of the activity. The lack of transparency in the use of AI will be considered a lack of academic honesty and may lead to a penalty in the grade of the activity, or greater sanctions in serious cases.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this link. To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn

(PAULm) Classroom practices (master)	1	English	second semester	morning-mixed
(PLABm) Practical laboratories (master)	1	English	second semester	morning-mixed
(PLABm) Practical laboratories (master)	2	English	second semester	morning-mixed
(SEMm) Seminars (master)	1	English	second semester	morning-mixed
(SEMm) Seminars (master)	2	English	second semester	morning-mixed
(TEm) Theory (master)	2	English	second semester	morning-mixed