

EPIDEMIOLOGY

Code: 90020 Curricular Year: 2nd Semester: 4th Compulsory Credits: 3.0 ECTS

Lecturer(s): Prof. Dr. Virgílio Almeida (CCP, and R) and Dr. Telmo Nunes

1. Contact hours:

Lectures - 14 Practical - 14 Total 28

2. Objectives:

To train the students to use the key principles and methods used in epidemiological investigations such as descriptive and analytic techniques as well as mathematical modelling, and to understand their relevance for the prevention, control, eradication, and surveillance of transmissible diseases, and to improve animal welfare, production efficiency and the quality of products of animal origin.

3. Programme:

Theoretical course:

Descriptive Epidemiology: types of population; major entry *vias* on the host and main mechanisms of transmission of agents within and between herds; disease ecology; One Health; emergent infectious diseases; agent defence mechanisms on the environment; exposition; monofactorial/multifactorial diseases; disease determinant factors associated the host, the agent and the environment; measuring disease frequency; time/space disease occurrence; epidemic curve; maps and geographical information systems.

Analytic Epidemiology: observational studies, risk factors, measures of association; sampling; screening and diagnostic tests; mathematical models; sources of data, data collection, storing, processing, and analysis; introduction to risk analysis, and economics of animal health.

Practical course:

National and international animal health databases; measuring disease occurrence in animal populations; sampling methods; questionnaire design; identification and ranking of risk factors; assessment of serological tests; import risk analysis for live animals.

4. Bibliography:

Presentations and articles provided by the teaching team.

Veterinary Epidemiology (M.Thrusfield, 4rd Edition, 2018)

Veterinary Epidemiologic Research (Dohoo I., Martin W., Stryhn H., 2nd Edition, 2009)

5. Assessment:

Final written exam concerning theoretical and practical themes. Minimal mark is 10 out of 20.