

## Epidemiology

### STRUCTURE

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|--|-----------------------------|
| <b>Study program</b>                                 | Veterinary Medicine         |
| <b>Year of study</b>                                 | III                         |
| <b>Semester</b>                                      | II                          |
| <b>Type of discipline</b>                            | Compulsory discipline       |
| <b>Total number of hours / week</b>                  | Course – 2 hour; PW-1hour   |
| <b>Total number of hours according to curriculum</b> | Course – 28 hour; PW-14hour |
| <b>ECTS</b>  | 3                           |

### DISCIPLINE OBJECTIVES

Provide students with some basic knowledge of veterinary epidemiology, the science that deals with the study of diseases dressing table and the epidemiological data of communicable diseases in animals, mainly due to infectious and parasitic agents, in order to prepare graduates to address specific issues, according to the progress made by this important branch of veterinary medical sciences.

### DISCIPLINE CONTENT

| COURSE   | Nr. ore |
|--|---------|
| <b>Chapter 1. Introduction. History, definitions. Epidemiology's place among sciences.</b>   | 1h      |
| <b>Chapter 2. Epidemiology branches</b>  | 3h      |
| 2.1. General Epidemiology: Geographical epidemiology, biomolecular and genetic epidemiology, and seroepidemiology, ecoepidemiology.  |         |
| 2.2. Special Epidemiologists. Epidemiology of communicable diseases. Epidemiology of noncommunicable diseases  |         |
| <b>Chapter 3. Structures of epidemiology: descriptive epidemiology, analytic epidemiology, epidemiology, operational and evaluative epidemiology</b>   | 1,5h    |
| <b>Chapter 4. The notion of "health"</b>   | 1h      |
| <b>Chapter 5. Goals of epidemiology. The relationship between the disease and operational goals of epidemiology (the primary, secondary and tertiary prevention).</b>  | 1h      |
| <b>Chapter 6. Basic concepts of epidemiology.</b>  | 1h      |
| <b>Chapter 7. The epidemiological investigation and its objectives: observation, experiment, statistics, epidemiological investigation, laboratory animal, epidemiological modeling, epidemiological surveillance, comparative historical analysis, special studies.</b> | 6h      |
| <b>Chapter 8. The importance of quantification in epidemiology.</b>  | 0,5h    |
| <b>Chapter 9. Reports in epidemiology: the proportion and ratio. Percentage of time.</b>   | 1h      |
| <b>Chapter 10. Choice of epidemiological unit</b>  | 1h      |
| <b>Chapter 11. Forms of the disease epidemiology.</b>  | 4h      |
| <b>Chapter 12. Detection of infectious animal diseases. Differences between diagnostic and screening.</b>  | 1h      |
| <b>Chapter 13. Methods of the study of infectious diseases in animals:</b>   | 4h      |
| Screening tests.   |         |

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|--|----|
| <b>Value tests. The sensitivity and specificity. Using tests.</b>  |    |
| <b>Chapter 14. The role and contribution of international veterinary organizations in the organization and dedication of veterinary epidemiology as a science.</b> | 2h |

| <b>PRACTICAL WORK PW</b>  | <b>Nr. ore</b> |
|---|----------------|
| <b>Chapter 1 - Concepts of epidemiological activity in relation to health and disease</b>   | 0,5h           |
| Chapter 2 - The modern concept of epidemic and epidemiological terminology.<br>2.1. Terms used in veterinary epidemiology.<br>2.2. Phases of disease<br>2.3. Representing different periods on contagiousness and infectiousness of an organism.<br>2.4. Other terms required (according to Professor Bernard Thomas)<br><b>zoning, regionalization, sheep, livestock, farm, farmed livestock industry</b>  | 2h             |
| <b>Chapter 3 - The epidemiology of animal diseases caused by agents infectious and parasitic</b><br><br><b>3.1. Different sectors of veterinary epidemiology.</b><br><br><b>3.2. Interaction of the pathogen, a population and the environment in which it lives</b><br><br><b>3.3. Choosing epidemiological unit : the individual - animal and animal - herd group</b>   | 5h             |
| <b>Chapter 4 - The main epidemiological indicators</b><br><br><b>4.1. General problems.</b><br><br><b>4.2. Prevalence.</b><br><br><b>4.3. Incidence.</b><br><br><b>4.4. Interdependence between incidence and prevalence of communicable diseases in a closed population affected by a pathogen agent that has some characteristics.</b><br><br><b>4.5. The relationship between incidence and prevalence of a disease in an area for a given period.</b> | 1,5h           |
| <b>Chapter 5 – Epidemiological forms of the disease.</b><br><br><b>5.1. Sporadic , enzootic , epizootic , panzootic evolution.</b><br><br><b>5.2. Structured epidemiological unit, in the field for the veterinary and human medicine.</b>  | 3h             |
| <b>Chapter 6 - Gross and specific epidemiological indicators</b><br><br><b>6.1. General problems.</b><br><br><b>6.2. Applying indicators to "animal" unit.</b><br><br><b>6.3 Application of indicators to unit "the herd".</b><br><br><b>6.4 .Main percent in timegross and specific.</b>   | 2h             |

## **BIBLIOGRAPHY**

1. BernardToma(2004) Epidemiology applied in collective struggle. Ed. EMEA.
2. Gonciarov Magda(2014)-Fundamentals of veterinary epidemiology , Ed Printech.
2. Gonciarov Magda(2017)-Veterinary epidemiology , Ed Printech.

**EVALUATION**

| Type of activity        | Evaluation criteria   | Method of evaluation   | Percentage of final grade % |
|-------------------------|---|--|-----------------------------|
| <b>Course</b>           | Assimilation of the theoretic notions. Participation course   | Grid examination   | 70%                         |
| <b>PW</b>               | Assimilation of the practical notions. Active participation in discussions after the lecture and after covering laboratory material.  | Interactive practical exam, and the final grade is Pass/Fail | 30%                         |
| <b>Other activities</b> | The final evaluation is conditioned by the attestation of the acquisition of the competencies by completing and signing the student's logbook by the student and by the teaching staff. |  |                             |

**Course teaching staff: Dr. Silvia Antoniu**

**Practical work teaching staff PW: Dr. Silvia Antoniu**