# Veterinary Epidemiology

First Course Syllabus for forth class

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| **Topic** | **subject** |
| **1** | **Introduction**   * Definitions. * Objectives of epidemiology and preventive medicine. * Uses of epidemiology. Types of epidemiology |
| **2** | **Occurrence of disease**   * Basic concepts of disease quantification * Measures of morbidity, Prevalence, Incidence. * Relationship between prevalence and incidence. * Measures of mortality. |
| **3** | **Diseases Transmission and Determinants**   * Mode of disease transmission. Susceptibility. * Clinical vs. subclinical diseases. * Endemic, epidemic, pandemic, and outbreaks. * Diseases determinants |
| **4** | **The economics of animal diseases** |
| **5** | **Data collection and management** |
| **6** | **Sampling and sample size** • Sampling methods.  • Sample size importance and calculation |
| **7** | **Study Design**   * Prospective vs. Retrospective * Observational studies: Descriptive. Cross-sectional. Case-control. Cohort. * Experimental studies • Field trials. * Randomized controlled trials (clinical trials). |
| **8** | **Measures of association**   * Absolute risk. Relative risk. Relative odds (odds ratio). * Attributable risk. Hazard ratio. Association vs. causation * Bias, confounding, and interaction. |
| **9** | **Survey and Surveillance** |
| **10** | **Control and Eradication of Diseases** |
| **11** | **Assessing validity and reliability of diagnostic tests**  , **(serological epidemiology)** |