



**Course Module**  
**Departement of Animal Science**  
**Faculty of Animal Science**  
**Universitas Brawijaya**

Module Name	Epidemiology
Module Level	Undergraduate Study Program of Animal Science
Code	PEF62006
Subtitle	-
Courses	Epidemiology
Semester (s)	6
Person responsible for the module	-
Lecturer	1. Rositawati Indrati. Dr.drh. MP 2. Masdiana C Padaga. Dr. drh.M.App.Sc 3. Ani Setianingrum. drh M.Sc 4. Widi Nugroho. PhD. drh
Language	Combination (Indonesian language and English)
Relation to curriculum	Study Program: Animal Science Specialization: Animal Science Type: <del>Compulsory/Non-Compulsory</del>
Type of Teaching contact hours	Contact hours and class size separately for each teaching method: lecture, lesson, project, practical etc.
Workload	Courses: 90,67 hours/semester Practical: 1,70 hours/semester
Credit Weight	3 credits/5.10 ECTS
Requirements according to the examination regulations	-
Recommended prerequisites	-
Requirements for Passing the Course	-
Prerequisite Course	Biology
Learning Outcomes	Learning Outcomes: 1. Capability to develop knowledge and comprehensive mindset based on Animal science and industry (LO 4) 2. Proficient in biology, physiology, animal nutrition, breeding, farm management, and implementation in Animal Science (LO 6) 3. Demonstrating good capability to be independent and to work in team as to identify and analyse problems (LO 11) 4. Capability to ethically design and perform experiments, analyze and interpret data as to provide sustainable problem solving in Animal Science (LO 12)

	<p>Course Learning Outcomes:</p> <ol style="list-style-type: none"> <li>1. Able to explain epidemiological concepts and techniques and identify factors that cause disease incidence from a management aspect</li> <li>2. Knowing the types of Strategic Infectious Animal Diseases (PHMS) in livestock based on KEPMENTAN NO 4026 / Kpts / OT.140 / 4/2013</li> <li>3. Able to calculate the incidence rate and risk factors for disease</li> <li>4. Understand the theoretical concepts and being able to formulate epidemiological disease prevention programs involving livestock groups based on livestock health management schemes</li> <li>5. Conduct an economic analysis of the impact of disease on livestock business in an effort to control the spread of livestock diseases based on the Law on Animal science and Animal Health.</li> </ol>
	<p>Objectives: Explaining and identifying factors causing the incidence of disease in livestock from management aspects based on an epidemiological triad, discussing factors causing disease in livestock populations that result in decreased production and preventing livestock disease through animal health programs, and discussing the principle of preventing disease transmission from animals to humans through livestock and the food chain of livestock</p>
	<p>Knowledge: Able to explain the concepts and techniques of epidemiology and identify the factors that cause the incidence of disease from the management aspect, Comprehend the types of Strategic Infectious Animal Diseases (PHMS) in livestock based on Decree of Minister of Agriculture of the Republic of Indonesia Number 4026/KPTS/OT.140/4/2013</p>
	<p>Skills: cognitive- Comprehend theoretical concepts and able to formulate epidemiological disease prevention programs involving livestock groups based on animal health management programs. Phsycomotoric-Students are able to calculate the incidence and risk factors for disease</p>
	<p>Competences: Conduct an economic analysis of the impact of disease on livestock business in an effort to control the disease transmission in livestock based on the Law on Husbandry and Animal Health.</p>

Learning Content	<p>Learning content include:</p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Basic Concepts of Animal Epidemiology</li> <li>3. Determinant Factor I: Hospes</li> <li>4. Determinant Factor II: Housing, Environment, and Nutrition</li> <li>5. Determinant Factor III: Agensia Disease</li> <li>6. Epidemiological Study Variables</li> <li>7. Distribution and Spread Patterns of Disease</li> <li>8. Strategic Infectious Animal Diseases (PHMS) and Priority Zoonoses in Animals</li> <li>9. Foodborne Disease</li> <li>10. Animal Health Scheme</li> <li>11. Surveillance, Control, and Eradication</li> <li>12. Animal Biosecurity</li> <li>13. Economic Impact of Animal Diseases</li> <li>14. Integrated National Animal Health Information System (i-SIKHNAS)</li> </ol>
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> <li>- Attendance &gt;80%</li> <li>- The final score of all the components of the PBM evaluation &gt;44</li> <li>- Final Score = (10% × Score of Structured Assignments) + (30% × Score of Practical work)+ (30% × Score of Midterm Exam) + (30% × Score of Final Exam)</li> </ul> <p>A : 80 &lt; Final Score ≤ 100  B+ : 75 &lt; Final Score ≤ 80  B : 69 &lt; Final Score ≤ 75  C+ : 60 &lt; Final Score ≤ 69  C : 55 &lt; Final Score ≤ 60  D : 50 &lt; Final Score ≤ 55  D+ : 44 &lt; Final Score ≤ 50</p>
Test Terms and Forms	<p>Examination requirements: A minimum of 80% attendance to attend Final Exam</p> <p>Forms of the test:  Multiple Choices and Essays</p>
Learning Media	Projector and screens, Zoom application, Google Classroom, e-book, WA Group
References	<ol style="list-style-type: none"> <li>1. Reece, W.O., H.H. Erickson, J.P. Goff, E.E. Uemura, 2015. Dukes' Physiology of Domestic Animals, 13th Edition.</li> <li>2. Hafez, E.S.E. and B. Hafez, 2013. Reproduction in Farm Animals, 7th Edition.</li> </ol>