



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

Module name	Farm Waster Management
Module level	Undergraduate Program
Code	PEP 61004
Subtitle	-
Courses	-
Semester(s)	6
Person responsible for the module	
Lecturer	<ol style="list-style-type: none"> <li>1. Dr. Ir. Muharlién, MP.</li> <li>2. Dr. Ir. Edhy Sudjarwo, MS.</li> <li>3. Adelina Ari Hamiyati, S.Pt.,MP.</li> <li>4. Heni Setyo Prayogi, S.Pt.,M.A.Sc.</li> <li>5. Dr. Dyah Lestari Yulianti, S.Pt.MP.</li> </ol>
Language	Indonesian and English
Relation to curriculum	Compulsory/ <del>Elective</del>
Type of teaching, contact hours	Contact hours and class size separately for each teaching method: course, structured assignment, practical etc.
Workload	Course: 90.67 hours/semester Practical: 42.50 hours/semester
Credit points	3 (2-1) SKS / 5.1 (3.40-1.70) ECTS
Requirements according to the examination regulation	-
Recommended prerequisites	Biology, Microbiology, Chemistry
Module objectives/intended learning outcomes	<p>ILO-6: Proficient in biology, physiology, animal nutrition, breeding, farm management, and implementation in Animal Science</p> <p>ILO-12: Capability to ethically design and perform experiments, analyze and interpret data as to provide sustainable problem solving in Animal Science</p> <p>ILO-13: Capability to implement technology in Animal Science to increase productivity, efficiency, quality and sustainability based on breeding, nutrition, processing, management as well as to organize an entrepreneurship concept and a sustainable production system</p>
	Objectives: This course discusses the science and knowledge about animal waste, waste management technology, basics in the development of industry-based animal waste management, business opportunities in the field of animal

	waste management, and integrated animal waste management technology on an industrial scale.
	Knowledge: Students understand the basic knowledge about animal waste, including: types, benefits, and processing technology and master basic science in animal waste management, including: biochemistry and microbiology
	Skills: cognitive- Students master animal waste processing technology, including biogas and composting. Physicomotoric- Students master the basics in developing animal waste management-based industries (organic fertilizer industry, Liquid Bio Gas industry) and business opportunities in the waste management sector.
	Competences: Students master animal waste management technology that is integrated on an industrial scale
Content	<p>Courses:</p> <ol style="list-style-type: none"> <li>1. Introduction: Basic knowledge (Types, benefits, and processing technology)</li> <li>2. Basic science: Biochemistry of fermentation, microbiology in the process of waste management</li> <li>3. Animal waste management technology: Biogas and compost</li> <li>4. Animal waste management-based on the industry: Organic fertilizer industry, Liquid Bio Gas industry</li> <li>5. Business opportunities from animal waste management products</li> <li>6. Industrial system: Integrated System of Animal Waste Management</li> </ol>
Study and examination requirements and forms of examination	<ol style="list-style-type: none"> <li>1. Midterm exam</li> <li>2. Final term exam</li> <li>3. Practical</li> <li>4. Structured assignment</li> </ol> <p>How to score</p> <ul style="list-style-type: none"> <li>- Midterm exam 30%</li> <li>- Final term exam 30%</li> <li>- Practical 30%</li> <li>- Structured assignments 10%</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  E : 0 &lt; Final Score ≤ 44</p>
Media employed	Projector and screens, Zoom application, Google Classroom, e-book, WA Group
Reading list	<ol style="list-style-type: none"> <li>1. Kaharudin and Sukmawati, 2010. Petunjuk Praktis; Manajemen Umum Limbah Ternak untuk Kompos dan Biogas. Balai Penelitian dan Pengembangan Pertanian. Balai Besar Pengkajian Pengembangan Teknologi Pertanian. Balai Pengkajian Teknologi Pertanian NTB. Kementerian Pertanian.</li> </ol>

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|  | <ol style="list-style-type: none"><li>2. Setiasih, 2011. Membuat Dekomposer Dari Bahan Lokal. Balai Pengkajian Teknologi Pertanian Jawa Timur.</li><li>3. Athena Lee Bradley. 2008. Manure Management for Small and Hobby Farms. Northeast Recycling Council, Inc.</li><li>4. Buku Ajar Biogas, Prof. Yunus. Brawijaya Press.</li></ol> |
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