06 December 2018

Course: Research Techniques in Animal Production

1. **Type** **:** Specialization's Elective
2. **Code** **:** PTD 6209
3. **Credit** **:** 2/0
4. **Semester** **:** Even
5. **Description** **:**

This course is designed to explore research techniques that are executed for improving the farm production of meat, egg, and milk. This course is provided as the students are able to find out the differences and also the similarities concerning to the comprehension in doing implementation at animal science field with all problems included especially for each laboratory. By using this introductory, students have understanding in animal collection number as sample, specific factors which influence each laboratory. Research method towards reproduction commodity and physiology becomes attentive which needs to be understood. The learning method used is by sampling and face-to-face meeting and also discussion concerning to the animal production research problems. The assessment conducted for the orientation definition of this course is by quiz and test.

6. **Course Outcomes (CO)**

CO 1 : Comprehend the research roles in science and technology development process at animal production field

CO 2 : Able to comprehend the problems comprehensively and identify the problems in animal production research development and also able to comprehend its research concepts and research techniques.

CO 3 : Able to use various research methods and techniques which are precise for getting accurate-meticulous problem solving in animal production field.

CO 4 : Able to elaborate the problems and connect them with problem solving process through research in animal production field.

CO 5 : Able to translate the proposal sistematically in arranging research schedule and precise data processing which match with the method used.

7. **The Alignment Between CO and ELO**

CO*	ELO**																	
	A				B			C				D					
	1	2	3	4	1	2	3	1	2	3	4	1	2	3	4	5	6
CO 1					✓	✓		✓				✓					
CO 2					✓	✓		✓	✓			✓	✓				
CO 3					✓	✓	✓	✓	✓	✓		✓	✓				
CO 4					✓	✓	✓	✓	✓	✓		✓	✓				
CO 5					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

*CO refers to point 6.

**Expected Learning Outcomes (ELO) are written below,

A. Attitudes and Behaviors

The graduates are able to behave well, correctly, and culturally as the result of internalization and actualization of values and norms, which is reflected in a spiritual and social life through learning process, experience, research, and/or community development in the animal husbandry.	
1	Piety to God and be able to show religious attitude and maintain the humanity values in carrying the task, which is based on religion, moral, and ethics.
2	Be proud and love the homeland show nationalism, and contribute to the improvement of the life quality in the community, nation and country, and the advancement of civilization according to Pancasila.
3	Showing the social sensitivity and attention to the community and environment by respecting the culture diversity, view, religious, beliefs, and other people's opinion, and also obey the rules.
4	Be accountable in carrying the professional practice that includes ability to accept accountability towards decision and professional action. It shall be according to the scope of the practice under their responsibility and laws.
B. Mastery in Sciences Master the theory of the current science in the animal husbandry and its application.	
1	Able to master the current animal science and its application theory.
2	Able to master the livestock production science, animal nutrition and fed science, animal products technology, and the livestock social economics in relation to food security and environment.
3	Able to master the design, management, and development of livestock research.
C. Special Skills The graduates are able to develop science, technology, and arts in the animal husbandry through interdisciplinary/multidisciplinary innovative and tested research.	
1	Able to make innovation in the animal husbandry based on the development of science and technology.
2	Able to design interdisciplinary and multidisciplinary research in the animal husbandry.
3	Able to formulate and solve problems in the national development especially in terms of animal husbandry.
4	Able to solve problems and anticipate issues in the development of animal science and industry.
D. General Skills The graduates are able to manage resources by utilizing science, technology, and arts to solve problems in the animal husbandry with current science and also conduct research with accountability and full responsibility.	
1	Able to develop logical, critical, systematic, and creative thought through scientific research, creation of design in the science and technology, which pays attention and applies humanity values according to their expertise. The graduates are able to arrange scientific concept and the study result based on the principles, procedures, and scientific ethics.
2	Able to identify the science that becomes their research object and position it to a research map by using information technology in the context of science development and expertise implementation developed through interdisciplinary or multidisciplinary approaches.
3	Able to make a decision in the context of solving problems in the development of science and technology, which pays attention and applies humanity values based on analysis study or experiment towards information and data.
4	Able to communicate the result of reasoning and scientific research in form of thesis and scientific writing responsibly based on academic ethics in the accredited national journal.
5	Able to maintain the academic integrity generally and avoid the plagiarism practice.
6	Able to communicate spoken and written English effectively by using the information technology for the development of animal science and its implementation.

8. Course Content

Week	CO	Topic/Subtopic	Learning Activity	Assessment Tools	Allocated Time	Lecturer

1	CO 1	Introduction	Classical lecture	Quiz, midterm, final exam	2	I Gede Suparta Budisatria
2	CO 1; 2; 3	Data collection	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	I Gede Suparta Budisatria
3	CO 3; 4; 5	Research in meat animal (problem tree formulation)	Classical lecture	Quiz, midterm, final exam	2	I Gede Suparta Budisatria
4	CO 3; 4; 5	Research in meat animal (topic and method)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	I Gede Suparta Budisatria
5	CO 3; 4; 5	Research in meat animal (result development and data analysis)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	I Gede Suparta Budisatria
6	CO 3; 4; 5	Research in dairy animal (topic; issues on dairy and milk industry)	Classical lecture	Quiz, midterm, final exam	2	Budi Prasetyo WB
7	CO 3; 4; 5	Research in dairy animal (methods)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	Budi Prasetyo WB
Midterm Examination						
8	CO 3; 4 ; 5	Research in poultry (topic and issues on poultry physiology and reproduction)	Classical lecture	Quiz, midterm, final exam	2	Sri Harimurti
9	CO 3; 4; 5	Research in poultry (methods)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	Sri Harimurti
10	CO 3; 4; 5	Research in physiology and reproduction (topics and issues	Classical lecture	Quiz, midterm, final exam	2	Sigit Bintara

		in the field of animal physiology and reproduction)				
11	CO 3; 4; 5	Research in physiology and reproduction (methods)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	Sigit Bintara
12	CO 3; 4; 5	Research in animal breeding(topic and issues in the field of animal breeding)	Classical lecture	Quiz, midterm, final exam	2	Tety Hartatik
13	CO 3; 4; 5	Research in animal breeding (methods)	Classical lecture; self-study; discussion	Quiz, midterm, final exam	2	Tety Hartatik
14	CO 3; 4; 5	Research techniques in animal production	Assignment and presentation	Presentation	2	Sri Harimurti, Tety Hartatik, Sigit Bintara, Budi Prasetyo WB, I Gede Suparta BS
Final Examination						

9. Assessment

Component	CO	Percentage (%) for final grade	Minimum Satisfactory Level
Midterm	CO 1; 2; 3	40	70
Quiz	CO 1; 2; 3	5	70
Presentation	CO 1; 2; 3; 4; and 5	5	70
Paper	CO 1; 2; 3; 4; and 5	10	70
Final exam	CO 3; 4; and 5	40	70
Total		100	

10. Lecturer

1. Tim Dosen

11. Reference

1. Rapid rural appraisal, participatory rural appraisal and aquaculture
2. Sustainability Pathways: Sustainability and organic livestock
3. Metode, Teknik, Instrument dan Analisa Penelitian
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5. Problem Tree Analysis. MDF Tool. Tersedia di: http://www. problem_tree_analysis_-_mdf_undated.pdf
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9. FAO animal production and health **guidelines.** guide to good dairy farming practice. food and agriculture organization of the united nations and international dairy federation Rome, 2011.
10. Georgina Villarreal Herrera. 2017. Sustaining Dairy, 2017.PhD thesis, Wageningen University, Wageningen, the Netherlands. With references, with summaries in English, Dutch and Spanish ISBN 978-94-6343-154-5 DOI 10.18174/410882. 331 pages.
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12. LandaisE, LhosteP, GuerinH. Les systèmes de gestion de la fumureanimale et leur insertion dans les relations entre l'élevage et l'agriculture. Cahiers Agricultures 1993; 2: 9-25.
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