Course: Experimental Design in Livestock Socio and Business

1. **Type** **:** Specialization's Compulsory
2. **Code** **:** PTE 6302
3. **Credit** **:** 2/0
4. **Semester** **:** Odd
5. **Description** **:**

   This course is designed to shape students' ability in carrying out experiment/research in the field of socio-economic and business with either quantitative or qualitative approach. Topics covered in this course: epistemology and ontology of research approach in the field of social and business, research process, research ethics, data source, quantitative experiment design (survey and experiment), qualitative experiment design (phenomenology, grounded theory, ethnography and case study, sampling design. This course also explains data collection that includes measurement and its scale, questionnaire formulation, in-depth interview, focus group discussion and observation, and data analysis, data interpretation, and research report writing.

6. **Course Outcomes (CO)**

   CO 1 : Able to explain the philosophy of research approach.
   CO 2 : Able to identify and determine a research idea.
   CO 3 : Able to explain and apply various type of experiment design to formulate research proposal.
   CO 4 : Able to formulate an rigid and robust research proposal.

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 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	Experiment Design in the field of Social and Business Research Ethics	Introduction to social and business research Research Process	Comprehension and discussion	2 x 50 minutes	

			Ethics for respondent, sponsor, and researcher			
2	CO 2; CO 3	Experiment	Experiment characteristic Type of experiment Validity in experiment	Comprehension, critical review, discussion	2 x 50 minutes	
3	CO 2; CO 3	Survey	Survey characteristic Type of survey	Comprehension, critical review, discussion	2 x 50 minutes	
4	CO 2; CO 3	Qualitative Research Approach	Philosophy assumption Interpretive approach Designing qualitative research	Comprehension, critical review, discussion	2 x 50 minutes	
5	CO 2; CO 3	Methods in Economic Research	Designing and reviewing research methods and economic research	Comprehension, critical review, discussion	2 x 50 minutes	
6	CO 3	Measurement	Definition Type of scale Error sources in measurement	Comprehension, critical review, and discussion	2 x 50 minutes	
7	CO 3	Measurement Scale	Determining measurement scale		2 x 50 minutes	

			Validity and reliability			
Midterm Examination						
8	CO 3	Questionnaires Formulation	Hierarchy of research questions Developing measurement	Presentation and discussion activity	2 x 50 minutes	
9	CO 3	Population and Sampling	Sample definition Type of sampling	Presentation and discussion activity	2 x 50 minutes	
10	CO 3	Qualitative Research	Narrative experiment Phenomenology research Grounded theory research	Comprehension, critical review, discussion	2 x 50 minutes	
11	CO 3	Qualitative Research	Ethnography research Case study research	Comprehension, critical review, discussion	2 x 50 minutes	
12	CO 3	Qualitative Data Collection	FGD, in depth interview, observation	Comprehension, critical review, discussion	2 x 50 minutes	
13	CO 3	Data Analysis and Report Writing	Tabulation, coding and data analysis Data interpretation Writing process	Comprehension, critical review, discussion	2 x 50 minutes	

14	CO 4	Research Proposal	Research proposal presentation	Discussion activity	2 x 50 minutes	
Final Examination						

9. Assessment

Component	CO	Percentage (%) for final grade	Minimum Satisfactory Level
Midterm	CO1; CO2; CO3	30	70
Discussion	CO2	10	70
Presentation	CO3	20	70
Research Proposal	CO4	15	70
Final Exam	CO3; CO4	30	70
Total		100	

10. Lecturer

1. Dr. Ir. Suci Paramitasari Syahlani, MM., IPM.
2. Dr. Tri Anggraini Kusumastuti, SP., MP.
3. R. Ahmad Romadhoni Surya Putra, S.Pt., M.Sc., Ph.D., IPM.

11. Reference

Books

1. Cooper, D.R. and Schindler, P. S. 2006. Business Research Methods. 9th ed. McGraw-Hill. Boston.
2. Creswell. John W. 2013. Qualitative Inquiry and Research design : Coosing Among Five Approach. 3rd ed. Sage. Los Angeles.

Article

3. Caldwell (1990) "Does Methodology Matter? How should it be practised?" Finnish Economic Papers 3(1):64-71.
4. D. Hausman (1989) “Economic Methodology in a Nutshell” Journal of Economic Perspectives 3(2): 115-127.
5. D. Wade Hands (1990) "Thirteen Theses on Progress in Economic Methodology" Finnish Economic Papers 3(1):72-76
6. Randall (1993) “What Practicing Agricultural Economists Really Need to Know about Methodology” American Journal of Agricultural Economics 75(October): 48-60 B.
7. Caldwell (1990) "Does Methodology Matter? How should it be practised?" Finnish Economic Papers 3(1):64-71.
8. Uskali Mäki (1990) "Methodology of Economics: Complaints and Guidelines" Finnish Economic Papers 3(1):77-84

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