Course: Poultry Behavior and Welfare

1. **Type**   **:** Specialization's Elective
2. **Code**   **:** PTD 6210
3. **Credit**   **:** 3/0
4. **Semester**   **:** Even
5. **Description** **:**

Poultry Behavior and Welfare course is designed for students to learn the comfort and physiology of poultry. The course is started by discussing environmental factors affecting poultry's physiology, mainly the physiology of egg-laying hormones, feed, and stressors in which poultry will respond with specific behavior. The relationship between physiology and these types of behavior are studied specifically, primarily its effects on performance. Body constitution and morphology are strongly related to the physiology, animal behavior, and environment. Animal behavior as a respond to environment is controlled by central nervous system. Students will discuss poultry behaviors, such as: feeding, mating, and comfort-related behaviors. The behavior towards fears will be learned from physiological perspectives since it is associated with poultry's adaptability and biosecurity. Students will also learn some poultry behavior-research model.

6. **Course Outcomes (CO)**

CO 1   :   a. Understand the principle concepts of poultry behavior started from hatching.
                       b. Understand that poultry requires behavior and time to adapt to the environmental alteration through morphological-physiological process.
                       c. Understand that stress is a result of inability on acclimatization and adaptation.
                       d. Understand that central-nervous system controls the formation specific survival behavior.

CO 2   :   a. Able to identify both negative and positive behaviors to enhance rearing management.
                       b. Able to evaluate poultry behavior to enhance rearing management.
                       c. Able to recognize the uncomfortable poultry caused by environmental factors.
                       d. Able to evaluate poultry requirement based on their basic behaviors.

CO 3   :   a. Able to explain basic needs is an important factor on poultry rearing.
                       b. Able to improve poultry rearing management based on poultry's comfort and welfare to enhance poultry production.
                       c. Able to perform animal behavior research according to developed criteria and method.

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 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, discussion	Midterm	2	Dr. Ir. Sri Sudaryati, MS
2	CO 1	Steroid hormones of female poultry	Classical lecture, discussion	Midterm	2	Dr. Ir. Sri Sudaryati, MS
3	CO 1	Steroid hormones of male poultry	Classical lecture, discussion	Midterm	2	Dr. Ir. Sri Sudaryati, MS
4	CO 1	Melatonin	Classical lecture, discussion	Midterm	2	drh. Bambang Ariyadi, MP., Ph.D
5	CO 1	Stress	Classical lecture, discussion	Midterm	2	drh. Bambang Ariyadi, MP., Ph.D
6	CO 2	The physiology of egg laying	Classical lecture, discussion	Midterm	2	drh. Bambang Ariyadi, MP., Ph.D
7	CO 3	The principles of poultry behaviour and its regulation	Classical lecture, discussion	Midterm	2	Prof. Ir. Wihandoyo, MS., Ph.D
Midterm Examination						
8	CO 1	Scope and function of poultry behaviour	Classical lecture, discussion	Final Exam	2	Prof. Ir. Wihandoyo, MS., Ph.D
9	CO 1	Environment's effects on poultry behaviour	Classical lecture, discussion	Final Exam	2	Prof. Ir. Wihandoyo, MS., Ph.D

	CO		Method	Assessment		Lecturer
10	CO 1	Social-physical interaction on poultry behaviour	Classical lecture, discussion	Final Exam	2	Dr. Ir. Heru Sasongko, MP
11	CO 1	Poultry-human interaction	Classical lecture, discussion	Final Exam	2	Dr. Ir. Heru Sasongko, MP
12	CO 2	Aspects of poultry behaviour	Classical lecture, discussion	Final Exam	2	Prof. Dr. Ir. Sri Harimurti, SU
13	CO 2	Broiler housing in tropical region according to animal welfare	Classical lecture, discussion	Final Exam	2	Prof. Dr. Ir. Sri Harimurti, SU
14	CO 3	Layer housing in tropical region according to animal welfare	Classical lecture, discussion	Assignment	2	Prof. Dr. Ir. Sri Harimurti, SU
Final Examination						

9. Assessment

Component	CO	Percentage (%) for final grade	Minimum Satisfactory Level
Midterm	CO 1	35	70
Quiz	CO 3	10	70
Presentation	CO 3	10	70
Paper	CO 3	10	70
Final Exam	CO 2, CO 3	35	70
Total		100	

10. Lecturer
1. Dr. Ir. Sri Sudaryati, MS.
2. Prof. Dr. Ir. Sri Harimurti, SU.
3. Prof. Dr. Ir Wihandoyo, MS., Ph.D.
4. Dr. Ir. Heru Sasongko, MP.
5. drh. Bambang Ariyadi, MP., Ph.D.

11. Reference