

Module designation	Advanced Animal Endocrinology
Semester(s) in which the module is taught	Even semester
Person responsible for the module	Prof. Ir. Diah Tri Widayati, M.P., Ph.D., IPM. Dr. Ir. Sigit Bintara, S.Pt., M.Si., IPU., ASEAN Eng. Prof. Dr. Ir. Ismaya, M.Sc.
Language	Bahasa and English
Relation to curriculum	Specialization's Elective
Teaching methods	Classical lecture and discussion
Workload (incl. contact hours, self-study hours)	Total workload: 79 hours Contact hours: - Lecture: 23 hours - Academic activity: 28 hours Private study: 28 hours
Credit points	2/0
Required and recommended prerequisites for joining the module	None
Module objectives/intended learning outcomes	<p>Course Outcomes:</p> <ol style="list-style-type: none"> <li>1. Able to comprehend and explain the endocrine/hormone which have relations with the metabolism process, growth, reproduction, and lactation on animal.</li> <li>2. Explore, identify, and analyse the problems which have relation with endocrine connected with the metabolism, growth, reproduction and lactation.</li> <li>3. Master the internet application for improving the knowledge and updated information in the animal endocrinology scope.</li> <li>4. Able to cooperate in a team, leadership and be responsible.</li> </ol> <p>Expected Learning Outcomes:</p> <ul style="list-style-type: none"> <li>- Attitudes and Behaviors: <ol style="list-style-type: none"> <li>1. 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. (CO4)</li> </ol> </li> <li>- Knowledge: <ol style="list-style-type: none"> <li>1. 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. (CO1)</li> </ol> </li> <li>- Special skills: <ol style="list-style-type: none"> <li>1. Able to solve problems and anticipate issues in the development of animal science and industry. (CO2)</li> </ol> </li> <li>- General skills: <ol style="list-style-type: none"> <li>1. 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. (CO3)</li> </ol> </li> </ul>

Content	This course discusses the endocrinology principles, the endocrine system roles in arranging metabolism, growth, reproduction and lactation on mammals.			
Exams and assessment formats	<b>Assessment Components</b>	<b>Course Outcomes (CO)</b>		<b>Percentage (%)</b>
	1. Midterm exam (written test, take home exam, paper assignment)	CO1 & CO2		30
	2. Final exam (written test, take home exam, paper assignment)	CO1 & CO2		30
	3. Short quizzes/ assignments	CO2 & CO3		20
	4. Discussion	CO3 & CO4		20
	<b>Grade and Score</b>			
	<b>Grade</b>	<b>Score</b>	<b>Grade</b>	<b>Score</b>
	A	≥80	C+	45-49,9
	A-	75-79,9	C	40-44,9
	A/B	70-74,9	C-	35-39,9
	B+	65-69,9	C/D	30-34,9
	B	60-64,9	D+	25-29,9
B-	55-59,9	D	20-24,9	
B/C	50-54,9	E	0-19,9	
Study and examination requirements	The final grade in the module is composed of 30% performance on Midterm exam, 30% final exam, 20% quiz/assignment, and 20% discussion. Students must have a final grade of 70% or higher to pass			
Reading list	<ul style="list-style-type: none"> <li>- Arthur, G.E., D.E. Noakes and H. Pearson, 1982, Veterinary Reproduction and Obstetrics, 5<sup>th</sup> edition, The English Language Book Society and BailliereTindall, London.</li> <li>- Bearden, J. H. and J.W. Fuquay, 2004, Applied Animal Reproduction, Reston Publishing Company Inc., Virginia.</li> <li>- Hafez, E.S.E., 2003, Reproduction in Farm Animals, 7<sup>th</sup> edition, Lea and Febiger, Philadelphia.</li> <li>- Kim E. Barrett, Scott Boitano, Susan M. Barman, Heddwen L. Brooks. 2016. Ganong's Review of Medical Physiology, Twenty-Fifth. McGraw-Hill Education, New York.</li> <li>- Geoffrey H. Arthur. 2001. Arthur's Veterinary Reproduction and Obstetric. Saunders, An imprint of Elsevier Limited. Edinburgh.</li> <li>- Noakes, D.E., T.J. Parkinson, G.C.W. England, G. H. 2018. Veterinary Reproduction &amp; Obstetrics. Saunders, Toronto.</li> <li>- Squires, J.E. Applied Animal Endocrinology. 2010. 2<sup>nd</sup>. Edition. CABI, United Kingdom</li> </ul>			