

Course: Biology of Lactation (HV0194) 2021

Grade criteria* and types of examination for the learning objectives of the course

Grade and grade criteria	5	The student can explain differences and similarities in development, anatomy and physiology of the mammary gland and surrounding tissue, including the physiology of lactation, between species of mammals included in the course, and between breeds of the specialized dairy species.			
	4				
	3	The student can describe the development, anatomy and physiology of the mammary gland and surrounding tissue, including the physiology of lactation.	The student can explain how the quality and process characteristics of the milk can be affected by management, feeding and milking routines and the impact of the genotype on the composition and quality of the milk.	The student can give examples of interactions between reproduction and lactation.	The student can explain the milk ejection reflex, describe its significance for the possibility of emptying the mammary gland and describe in detail different steps in lactation and in milking routines, describe in detail how a milking machine works and describe the interaction between animals, humans and technology regarding milking.
Learning objective	1. Describe the development, anatomy and physiology of the mammary gland and surrounding tissue, including the physiology of lactation	2. Explain how the quality and process characteristics of the milk can be affected by management, feeding and milking routines and the impact of the genotype on the composition and quality of the milk.	3. Give examples of interactions between reproduction and lactation.	4. Explain the milk ejection reflex, describe its significance for the possibility of emptying the mammary gland and describe in detail different steps in lactation and in milking routines, describe in detail how a milking machine works and describe the interaction between animals, humans and technology regarding milking-	
Type of examination	Open book exam	Open book exam	Open book exam	Open book exam	

* The criteria for grades 4 and 5 indicate what should be fulfilled in addition to the criteria for the underlying grade level(s)

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Grade and grade criteria	5			The student uses relevant scientific literature to support his/her suggestions regarding dairy production systems.	
	4			The student can integrate new information into his/her previous knowledge about lactation and dairy production.	
	3	The student can give examples of the most common pathogens and pathological changes affecting lactating udders and describe metabolic disease states that are linked to lactation.	The student can describe and propose different forms of methodology analysis used for quality determination of milk.	The student can, on the basis of biological knowledge, assess and evaluate milking techniques, routines and care adjacent to milking to achieve optimal production, milk raw material and animal health and discuss the impact on the sustainability of milk production from a social, economic and ecological perspective.	The student can discuss and summarize scientific studies in lactation biology.
Learning objective	5. Give examples of the most common pathogens and pathological changes affecting lactating udders and describe metabolic disease states that are linked to lactation.	6. Describe and propose different forms of methodology analysis used for quality determination of milk,	7. On the basis of biological knowledge, assess and evaluate milking techniques, routines and care adjacent to milking to achieve optimal production, milk raw material and animal health and discuss the impact on the sustainability of milk production from a social, economic and ecological perspective.	8. Discuss and summarize scientific studies in lactation biology.	
Type of examination	Open book exam	Literature seminar	Open book exam and Literature seminars	Literature seminar	

* The criteria for grades 4 and 5 indicate what should be fulfilled in addition to the criteria for the underlying grade level(s)

EXAMINATIONS IN THE COURSE:

1. Examination of seminars

The course includes literature seminars that focus on learning objectives 6 and 8 but also include knowledge from other course objectives. The seminars include a written summary and an oral presentation. Literature seminars are graded pass/fail.

2. Open book exam

The final exam is a written open book exam. All literature and notes can be used during the exam but it is not allowed to search on the internet or be in contact with other people during the exam time.

LADOK: THE COURSE IS REPORTED IN ONE MODULE OF 7.5 CREDITS