

Module Name	Module Code
Ruminant Nutrition and Biochemistry	AEF-ds009
Module Coordinator	
Prof. Dr. Andreas Susenbeth	
Organizer	
Institute of Animal Nutrition and Physiology - Animal Nutrition	
Institute of Animal Nutrition and Physiology - Nutritional Physiology and Biochemistry	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

ECTS Credits	6
Evaluation	Graded
Duration	one semester
Frequency	Only takes place during summer semesters
Workload per ECTS Credit	30 hours
Total Workload	180 hours
Contact Time	60 hours
Independent Study	120 hours
Teaching Language	English

Recommended Requirements			
Basics in animal nutrition, feed science, biochemistry, and physiology (according to the BSc level in agriculture)			
Module Courses			
Course Type	Course Name	Compulsory/Optional	SWS
Lecture	Ruminant Nutrition	Compulsory	2
Lecture	Ruminant Physiology and Biochemistry	Compulsory	2
Tutorial	Ruminant Nutrition	Additional subject	2

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Oral Examination: Ruminant Nutrition and Biochemistry	Oral Examination	Graded	Compulsory	100
Further Information on the Examination(s)				
Further Information on the Examination(s) 1.+2. period in summer semester 1. period in winter semester examiner: Prof. Dr. Susenbeth, Prof. Dr. Wolfram QIS: 300100 with examination 300110				

Course Content
Worldwide situation for notifiable diseases (epizootocs) according to OIE-databases; other relevant infectious and non-infectious diseases of dairy cattle; pathogenesis, diagnosis and prevention of relevant diseases in ruminants with special focus on mastitis & fertility; dairy herd health management, routine monitoring procedures. In the seminar. As a prerequisite for the oral exam, students do a group-presentation of health-related facts and figures from selected countries all over the world and each student presents one disease topic.
Learning Outcome
Students achieve in-depth knowledge on etiology, diagnosis, spread and prevention of selected infectious diseases in ruminants and on general animal health management. They acquire skills for analyzing health & fertility management on dairy farms and learn how to find (and critically assess) solutions for improved on-farm health management procedures. They are able to identify important diseases and epizootics worldwide.
Reading List
Lecture slides The following books might be read at the institute of animal breeding and husbandry. We do not recommend buying them due to cost issues. Brand, A., Noordhuizen, J.P.T.M., Schukken, Y. (1996) Herd Health and Production Management in Dairy Practice. Wageningen Academic Publishers. ISBN 9789074134347. Green, M.J., Bradley, A.J. (2012): Dairy Herd Health. CABI, ISBN 9781845939984. Noordhuizen J. (2012): Dairy Herd Health and Management: A Guide for Veterinarians and Dairy Professionals. Context Products, ISBN: 978-1899043361
Additional Information
Two presentations will be given by each student: A) facts and figure (group presentation) B) disease. Contents of the own disease presentation will be part of the oral exam.

Use	Compulsory / Optional	Semester
Master, 1-subject, Agricultural Sciences, Agricultural Economics, (Version 2017)	Optional	1.
Master, 1-subject, Agricultural Sciences, Agricultural Economics, (Version 2013)	Optional	1.
Master, 1-subject, Agricultural Sciences, Agribusiness, (Version 2017)	Optional	1.
Master, 1-subject, Agricultural Sciences, Agribusiness, (Version 2013)	Optional	1.
Master, 1-subject, Agricultural Sciences, Crop Sciences, (Version 2017)	Optional	1.
Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2017)	Compulsory	1.
Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2013)	Optional	1.
Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2017)	Optional	1.
Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2013)	Optional	1.
Master, 1-subject, Dairy Science, (Version 2017)	Compulsory	1.
Master, 1-subject, Nutritional and Food Science, (Version 2013)	Optional	1.
Master, 1-subject, Nutritional and Consumer Economics, (Version 2017)	Optional	1.
Master, 1-subject, Nutritional and Consumer Economics, (Version 2013)	Optional	1.