

Module Name	Module Code
Precision Livestock Farming	agrarAEF810-02b
Module Coordinator	
Prof. Dr. Eberhard Hartung	
Organizer	
Faculty of Agricultural and Nutritional Sciences - Institute of Agricultural Engineering	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

ECTS Credits	6
Evaluation	Graded
Duration	1 Semester
Frequency	Only takes place during winter semesters
Workload per ECTS Credit	30 hours
Total Workload	180 hours
Contact Time	60 hours
Independent Study	120 hours
Teaching Language	English

Module Courses			
Course Type	Course Name	Compulsory/ Optional	SWS
Lecture	Precision Livestock Farming	Compulsory	2
Seminar	Precision Livestock Farming	Compulsory	2
Prerequisites for Admission to the Examination(s)			
Prerequisite for admission to the oral examination is a passed and graded seminar paper with assignment. The grade is included in the examination grade at a rate of 25% to improve the grade.			

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Oral Examination: Precision Livestock Farming	Oral Examination	Graded	Compulsory	100
Further Information on the Examination(s)				
1.+2. period in winter semester 1. period in summer semester QIS: 61904 mit PL 61930				

Course Content
Tools and methods to monitor, analyse, control, and manage processes in animal production, such as RFID, image analysis, infrared spectroscopy, modelling and data exchange formats. Application areas, such as animal identification, sensor networks, monitoring and control of, e.g., animal health and behaviour, production processes, product quality, indoor climate and emissions of husbandry systems.
Learning Outcome
Students learn about functional principles and applications of sensor-based monitoring and control systems in animal production. They achieve skills to better understand application, use, value and validity of sensors and data, find solutions to monitor and control production process, animal health and product quality, and prepare and present results published in peer-reviewed articles.
Reading List
Copies of files presented, scientific journal papers, conference papers, and textbooks. Relevant articles will be distributed during lectures. Textbooks: Advances in Precision Livestock Farming, D. Berckmans (Ed.), 2022, eISBN: 978-1-78676-474-4 ISBN: 978-1-78676-471-3 Precision Livestock Farming Applications, I. Halachmi, 2015, eISBN: 978-90-8686-815-5 ISBN: 978-90-8686-268-9, https://doi.org/10.3920/978-90-8686-815-5

Additional Information
Maximum number of participants: 24 - Up to 10 places will be allocated preferably to students in the Dairy Science master's program Enrollment by OLAT within workdays Monday through Friday in the 1st week of the 2. audit period of the preceding semester. The allocation of the places takes place in the 2nd week of the 2. audit period of the preceding semester. Notification will be sent to the stu-email address. Acceptance of the place by students only through participation at the first day of the course. Students without a place can get a place at the first day of the course by move-up procedure.