PNS0230 Ruminant Nutrition-Digestion and Forage Chemistry, 7 credits

PhD course arranged by Graduate School for Veterinary Medicine and Animal Science (GS-VMAS)

Course date: March 28 – April 27, 2022 (220328-220401 + 220421-220427)

Location: Umeå

Content

The course will include a combination of short lectures, small-scale laboratory exercises (in vitro gas production technique), discussion of literature, and student-led presentations – all designed to foster close interaction among students and instructors.

The outline of the course is as below:
1. Evolution, feeding strategies and plant-animal interactions
2. Forage chemistry
3. Forage evaluation methods
4. Rumen function and microbiology
5. Digesta passage kinetics
6. Digestion of carbohydrates
7. Energy balance in ruminants
8. Methodologies measuring methane production in ruminants

Depending on the pandemic situation and in addition to lectures, paper discussions, in vitro exercise with calculations and modelling will be included. Calculation exercises like passage kinetics, rumen fermentation stoichiometry will also be given.

The total study time will be as below: 1 week of 5 full days teaching by distance that will equal to 1.5 credits, 1 week of physical attending the course in Umeå which requires 7 days that equals to 2 credits, 1 credit will be assigned to the exercises students will undergo during the whole 2 week course, 1.5 credit will be for the 1 week time students will have to finalize their examination, and 1 credit will be assigned for the preparation for the course (students will be required to read papers that will be given to them 2-3 weeks prior to the course start). The papers they read will be used for presentations and group activities during the course as well. The total course credit will then be: 1.5 + 2 + 1 + 1.5 + 1 = 7 credits

Note: The first week lecturer will be arranged to be given in Umeå, NJV in a room that is capable of video conference so that the presentations will be given online via Zoom as well to students not able to travel the first week.

Prerequisites

Admitted to a postgraduate program in animal science or biology, or to a residency program in veterinary science. Minimum requirement is an MSc level in animal nutrition or strong background in related biological sciences.

Information and application: http://www.slu.se/gs-vmas-courses
Course leader: Mohammad Ramin (mohammad.ramin@slu.se)

Last date for application: February 28, 2022