

SLUkurs

Syllabus

PVSo170 Biology of lactation in dairy systems with cow and calf contact, 5.0 credits

Syllabus approved

2021-11-26

Subjects

Animal Science

Education cycle

Third cycle

Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

Admitted to a postgraduate program in animal science, veterinary medicine, biology or related subjects, or to a residency program in animal reproduction or bovine health management.

Objective, including learning outcomes

On completion of the course, the student should be able to:

- Explain the physiology of milk synthesis and milk ejection, how this can be affected by milking, suckling, calf contact, barn design and management system and suggest scientific methods for studying these factors.
- Assess effects on animal welfare in systems for dairy production with cow and calf contact
- Discuss effects on economic, social and environmental sustainability in systems for dairy production with cow and calf contact and suggest methodology for evaluating this.
- Demonstrate practical skills in data collection relevant for research in systems for dairy production with cow and calf contact and show understanding of strengths and weaknesses with different data collection methods.
- Based on scientific literature identify knowledge gaps in the field of dairy production with cow and calf contact, propose how these gaps may be bridged by designing a scientific study including methods for data collection.

Content

The course targets research students in the field of dairy production with cow and calf contact. The aim of the course is to give the participants a deep understanding of how cow and calf contact affects milk synthesis and milk removal and how this can be studied. The course will also provide an overview understanding of how cow and calf contact affects the economic, social and environmental sustainability of dairy production.

The course has three blocks (modules):

- 1) Distance learning in a flipped classroom design, covering milk synthesis, milk ejection, milk removal and milk quality. A combination of literature, lectures, group discussions and assignments will be used. Total study time approximately 46 hours.
- 2) Campus teaching (SLU Ultuna, Uppsala, Sweden), with focus on research methodology for studying dairy production with cow and calf contact, including presentations of students' own research projects. During the campus teaching week students will meet active researchers in the field and do study visits. Teaching will be characterized by a high level of interactions between teachers and students in discussions and seminars. Total study time approximately 40 hours.
- 3) The course finishes with an individual project that is presented in a short written summary and an oral presentation with opponents, again using distance learning techniques. Total study time approximately 46 hours.

Block 2 will be one week full time teaching at Ultuna Campus. Block 1 and 3 will be scheduled to allow students to study 50-100%, depending on their other activities.

Requirements for examination

Learning objectives will be examined in individual and group assignments, group discussions and seminars on campus and project presentations (oral and a written summary).

Additional information

The course is a blended learning course with one week on campus. This week is important for learning about different management solutions for dairy production with cow and calf together, and for developing skills in methods for data collection. Students will share methods they have experienced, and learn from each other and from teachers.

Responsible department

Department of Animal Nutrition and Management