

## Schedule for the course ”Exercise physiology and rehabilitation for performance and injury prevention, BI1358,” 15.0 credits

Time: 2021-01-18 – 2021-03-23

Version 2020-01-18

**Course coordinator:** *Lisa Johansson*

**Examiner:** *Anna Jansson*

**Contact:** [Lisa.Johansson@slu.se](mailto:Lisa.Johansson@slu.se) 018-672192, [Anna.Jansson@slu.se](mailto:Anna.Jansson@slu.se) 018-672106;

The course is given partly as independent studies which may be conducted from a distance. Activities marked in **bold** letters are compulsory.

Parts of the course will be given in collaboration with the courses “Rehabilitation after illness and injury in companion and sports animals, VM0124” (green background colour) and DO0104 “Rehabilitation within veterinary care” (beige background colour).

<b>Date</b>	<b>Time</b>	<b>Activity</b>	<b>Teacher</b>	<b>Room</b>
week 3				
Monday 18/1	9.15-9.45	<b>Intro: course information</b>	LJ, AJ	zoom
	10.00-11.15	Introduction to veterinary rehabilitation and functional anatomy	ABe	zoom
	11.30-12.00	Performance	AJ	zoom
	12.00-12.30	Information examination essay	AJ	zoom
Tuesday 19/1	during morning	Visit the reception at Ull’s house to get inlogg, passage cards, etc		
	9.00-17.00	Demo functional anatomy	ABe	Amphitheater
See separate schedule	Independent repetition of the anatomy of the musculoskeletal system	”Dry and wet” Asis		

Wednesday 20/1		Independent studies		
Thursday 21/1	13.15-14.15	Injury perspective in different sports	MR	zoom
	14.30-15.30	Physiology of the locomotion apparatus, joints, tendons and ligaments	MR	zoom
Friday 22/1	9.15-10.30	Acute effects of physical activity -an overview	AJ	zoom
	11.00-12.00	Muscle physiology: a) an important method b) effects of exercise and rest	AJ	zoom
	13.15-14.30	Circulation -effects of training	AJ	Recorded
<b>Focus on learning objective: 2+3+4.</b>				
Repeat functional anatomy, tissue response to different loads, healing processes				
<b>Training plan:</b> think about your cases orientation				

week 4				
Monday 25/1		Independent studies		
Tuesday 26/1		Independent studies		
Wednesday 27/1		Independent studies		
Thursday 28/1		Independent studies		
Friday 29/1		Independent studies		
<b>Focus on learning objective 2+3+4</b>				
<b>Study material:</b> course book p 1-132 and 143-168. Work with functional anatomy “Which muscles work do what?” Literature available in Canvas under 'Anatomy'. Videos are available at canvas page "resursrum rörelseapparaten". Papers about tissue healing and load response				
<b>Training plan:</b> choose subjects				

week 5				
Monday 1/2	10.15-12.00	Biomechanics I	MR	zoom

Tuesday 2/2	10.00-11.00	Standardised exercise tests	AJ	Recorded
	11.15-12.00	Practical training: exercise test as a method to measure response to exercise	AJ	Recorded
	14.15-16.15 See separate schedule.	Practical training palpation. Two groups on dog and horse who then shift. Bring your dog if you can.	ABe, JS, MR, AP	UDS: Bulan 1 and 2 (dog) house 3 (horse)
	16.15-17.00	<b>Practical examination: Measurement of normal values at rest.</b>		House 3
Wednesday 3/2		Independent studies, work with exercise test data		
Thursday 4/2	9.15-10.00	Follow-up on the exercise test	AJ	zoom
	10.15-12.00	The young horse project -a long term perspective study	AJ	zoom
	13.15-14.00	Intro to "Trainer cases"	AJ	zoom
Friday 5/2	10.15-12.00	The importance of breeding and conformation for performance and longevity	ÅV	zoom
<b>Focus on learning objective 2+3+5</b>				
<b>Study materials:</b> Read p 193-209 in course book. Work with "Injury prevention: physical activity during growth" By reading provided articles in canvas and do quiz				
<b>Training plan:</b> make a draft of a long-term training program, focus on the tissue development of young animals				

week 6				
Monday 8/2		Independent studies		
Tuesday 9/2	13.15-14.00	Respiratory organs and performance	MRi	zoom

	14.15-15.00	Blood samples -what can they tell?	MRi	zoom
Wednesday 10/2	9.15-12.00	Rehabilitation horse	HH	zoom
	14.15-16.00	<b>Group discussion: cases within animal rehabilitation</b>	AJ	zoom
Thursday 11/2		Independent studies		
Friday 12/2		Independent studies		
<b>Focus on learning objective 3+5+7.</b>				
<b>Training plan:</b> continue to make a draft of a long-term training program, focus on the tissue development of young animals				

week 7				
Monday 15/2		Independent studies		
Tuesday 16/2		Independent studies		
Wednesday 17/2		Independent studies		
Thursday 18/2		Independent studies		
Friday 19/2		Independent studies		
<b>Focus on learning objective 3+5+7</b>				
<b>Training plan:</b> search and study literature				

week 8				
Monday 22/2		Independent studies		
Tuesday 23/2		Independent studies		
Wednesday 24/2		Independent studies		
Thursday 25/2		Independent studies		
Friday 26/2		Independent studies		

<b>Focus on learning objective 6</b>				
<b>Study materials:</b> Read p 410-423 and p 253-259 in the course book, read the articles Jansson & Lindberg 2012 and Jansson 2005. Prepare for the seminar 2/3 by reading the articles. Work with trainer cases. Do the test in canvas as preparation for the examination next week.				
<b>Training plan:</b> gather information and keep on writing you training programs				

week 9				
Monday 1/3	10.15-12.00	<b>Canvas test</b>	LJ	Datorsal 2 (library)
	13.15-15.00	The importance of footing for performance and injury prevention	EH	zoom
Tuesday 2/3	10.15-12.00	<b>Seminar: when is there scientific evidence?</b>	AJ	zoom
	13.15-15.00	Biomechanics II	MR	zoom
	15.30-17.00	Demonstration: sensor technique to measure equine locomotion	MR	stable
Wednesday 3/3		Independent studies, Read two articles and do quiz. Nutrition for performance -dog		
		<b>Hand in trainer cases (1 page)</b>		
Thursday 4/3	10.15-12.00	Presentations of trainer cases	AJ	zoom
	13.15-14.00	Nutrition for prevention	AJ	zoom
	14.15-16.00	Nutrition for performance -horse	AJ	zoom
Friday 5/3		Effect of rest and detraining	AJ	Recorded

		Summary	AJ	Recorded
<b>Focus on learning objective 2+3+4+6</b>				
<b>Training plan:</b> continue writing and analyse your ideas				

week 10				
Monday 8/3		Independent studies		
Tuesday 9/3		Independent studies		
Wednesday 10/3		Independent studies		
Thursday 11/3		Independent studies		
Friday 12/3		Independent studies		
<b>Focus on learning objective 2+3+5</b>				
<b>Training plan:</b> prepare presentation, finish writing the 1 <sup>st</sup> draft, send to examiner and other course participants 15/3				

week 11				
Monday 15/3		<b>Send in training plan</b>		
Tuesday 16/3	8.15-17.30	<i>Seminar presentation rehabilitation plans</i>		zoom
Wednesday 17/3		Independent studies		
Thursday 18/3	8.15-15.00	<b>Presentations training plans</b>	AJ	zoom
Friday 19/3		Independent studies: revise training plan		

week 12				
Monday 22/3		Independent studies: revise training plan		
Tuesday 23/3		<b>Send in training plan</b>		

## Teachers

AJ Anna Jansson  
ABe Anna Bergh  
JS Josefin Söder  
EH Elin Hernlund  
LJ Lisa Johansson  
MR Marie Rhodin  
ÅV Åsa Viklund  
MRi Miia Riihimäki  
HH Heli Hyttiäinen, Finlands Veterinärhögskola

## Locations

Please see <https://www.slu.se/en/about-slu/locations/slu- uppsala/> for maps of the area and buildings.

Asis and Amfiteatern: in **VHC** (veterinärmedicinskt och husdjursvetenskapligt centrum, Ulls väg 26), house 4 floor 2 and 3

Datorsal 2: located within the library in **Undervisningshuset**, floor 1