

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

Time: 2022-01-17 – 2022-03-23

Version 211213

Course coordinator: Sara Ringmark

Examiner: Anna Jansson

Course administration: us-frist@slu.se

Contact: Sara.Ringmark@slu.se 018-671422, Anna.Jansson@slu.se 018-672106

The course is given partly as a distance-learning course, i.e. some weeks are free from teaching activities but meant to be reserved for independent literature studies as well as work with the training plan (course examination). Activities marked in **bold** letters are mandatory.

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).

Date	Time	Activity	Teacher	Room
week 3				
Monday 17/1	8.30-9.15	Intro: course information	SR, AJ	Sal Q
	9.15-9.45	Performance	AJ	Sal Q
	10.00-11.30	Introduction to rehabilitation and rehabilitation order. Introduction to veterinary rehabilitation and functional anatomy.	ABe	Dvalin (VHC)
	12.30-14.15	<i>The anatomy of the musculoskeletal apparatus</i>	JS	Sal V
	14.30-15.15	Information examination essay	AJ	Sal P

Tuesday 18/1	8.00-17.00 separate schedule	Anatomy, independent repetition and demo of functional anatomy (separate schedule) Practical training palpation. Two groups on dog and horse, respectively, who then shift. Bring your dog if you can.	ABe, JS, MR, AP	Asis (dry and wet), Amphitheatre Bulan 1 and 2 (dog) hus 3 (horse)
		Practical examination: Measurement of normal values at rest.	AJ	hus 3
Wednesday 19/1	9.15-10.00	Physiology of the locomotion apparatus, joints, tendons and ligaments	MR	zoom
	10.15-11.00	Injury perspectives in different sports	MR	zoom
	11.15-12.15	Acute effects of physical activity -an overview	AJ	zoom
Thursday 20/1		Independent studies		
Friday 21/1	9.15-10.30	Muscle physiology: a) an important method b) effects of exercise and rest	AJ	zoom
	11.00-12.00	Circulation -effects of training	AJ	Recorded
Focus on learning objective: 2+3+4.				
Repeat functional anatomy, tissue response to different loads, healing processes				
Training plan: think about your cases orientation				

week 4				
Monday 24/1		Independent studies		
Tuesday 25/1		Independent studies		
Wednesday 26/1		Independent studies		
Thursday 27/1		Independent studies		
Friday 28/1		Independent studies		
Focus on learning objective 2+3+4				
Study material: 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				

Training plan: choose subjects

week 5				
Monday 31/1	10.15-12.00	Biomechanics I	MR	zoom
Tuesday 1/2	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
Wednesday 2/2		Independent studies, work with exercise test data		
Thursday 3/2	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	SR	zoom
	13.15-14.00	Intro to "Trainer cases"	AJ	zoom
Friday 4/2		Independent studies		
Focus on learning objective 2+3+5				
Study materials: Read p 193-209 in course book. Work with "Injury prevention: physical activity during growth" By reading provided articles in canvas and do quiz				
Training plan: make a draft of a long-term training program, focus on the tissue development of young animals				

week 6				
Monday 7/2		Independent studies		
Tuesday 8/2	10.15-12.00	The importance of breeding and conformation for performance and longevity	ÅV	zoom
	13.15-14.00 or when you like	Respiratory organs and performance	MRi	Recorded

	14.15-15.00 or when you like	Blood samples -what can they tell?	MRi	Recorded
Wednesday 9/2	9.15-12.00	Rehabilitation of the horse	HH	zoom
	13.15-15.00	Group discussion: cases within animal rehabilitation	SR	zoom
Thursday 10/2	10.15-12.00	The importance of footing for performance and injury prevention	EH	zoom
Friday 11/2	9.15-10.00 or when you like	Effect of rest and detraining	AJ	Recorded
Focus on learning objective 3+5+7.				
Training plan: continue to make a draft of a long-term training program, focus on the tissue development of young animals				

week 7				
Monday 14/2		Independent studies		
Tuesday 15/2		Independent studies		
Wednesday 16/2		Independent studies		
Thursday 17/2		Independent studies		
Friday 18/2		Independent studies		
Focus on learning objective 3+5+7				
Training plan: search and study literature				

week 8				
Monday 21/2		Independent studies		
Tuesday 22/2		Independent studies		
Wednesday 23/2		Independent studies		
Thursday 24/2		Independent studies		
Friday 25/2		Independent studies		

Focus on learning objective 6
Study materials: 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 1/3 by reading the articles. Work with trainer cases. Do the test in canvas as preparation for the examination next week.
Training plan: gather information and keep on writing you training programs

week 9				
Monday 28/2	10.15-12.00	Canvas test	SR	Datorsal 1 (library)
	13.15-15.00	Biomechanics II	MR	Sal Q
	15.30-17.00	Demonstration: sensor technique to measure equine locomotion	MR	stable
Tuesday 1/3	9.15-11.00	Seminar: when is there scientific evidence?	DS	zoom
	12.00-14.00	Discussion about trainer cases	DS/SR	zoom
Wednesday 2/3		Independent studies, Read two articles and do quiz. Nutrition for performance -dog		
Thursday 3/3	9.15-10.00	Nutrition for prevention	SR	zoom
	14.15-16.00	Nutrition for performance -horse	AJ	zoom
		Send in trainer cases (1 page)	SR	
Friday 4/3	9.15-10.00	Nutrition for performance -dog	SR	zoom
	10.15-11.00	Summary	AJ	Recorded
Focus on learning objective 2+3+4+6				

Training plan: continue writing and analyse your ideas

week 10				
Monday 7/3		Independent studies		
Tuesday 8/3		Independent studies		
Wednesday 9/3		Independent studies		
Thursday 10/3		Independent studies		
Friday 11/3		Independent studies		
Focus on learning objective 2+3+5				
Training plan: prepare presentation, finish writing the 1st draft, send to examiner and other course participants 15/3				

week 11				
Monday 14/3		Send in training plan		
Tuesday 15/3	8.15-17.30	<i>Seminar presentation rehabilitation plans</i>		
Wednesday 16/3		Independent studies		
Thursday 17/3	8.15-15.00	Presentations training plans	AJ	zoom
Friday 18/3		Independent studies: revise training plan		

week 12				
Monday 21/3		Independent studies: revise training plan		
Tuesday 22/3		Independent studies: revise training plan		
Wednesday 23/3		Send in training plan		

Teachers

AJ Anna Jansson
ABe Anna Bergh
JS Josefin Söder
EH Elin Hernlund
SR Sara Ringmark
MR Marie Rhodin
ÅV Åsa Viklund
MRi Miia Riihimäki
HH Heli Hyytiäinen, 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