

APBI 316: Equine Biology, Health and Welfare

Hugh Dempster Pavilion Room 301
Tuesdays and Thursdays 4:00pm – 5:30pm
January 6 - April 9, 2015

General Course Information

This course examines the natural history, biology and welfare of *Equus* species with a focus on the domestic horse. Equids have played an important role in human society; therefore the course will start with situating the Equid in history, in art and in current society. In order to understand how we care for, manage and interact with horses a firm understanding of the natural history and biology of the horse will be examined. This will include understanding behaviour, anatomy, nutrition, and reproduction. The pathology, prevention and treatments of common diseases and health conditions will be presented. Finally, this understanding will be applied to the identifying and understanding the modern challenges of keeping horses in captivity and working with them as pleasure, working, food or sport horses.

Students will be challenged to integrate their knowledge from the entire course. As a basis for examinations, students will observe and analyze horse behaviour, learn common health problems and treatments, learn common welfare concerns and how these might be resolved. As a seminar course, students are expected to have read the assigned readings before each class and be prepared to discuss them in small or large groups and to answer questions by the instructors or other students. Classes will typically include a combination of lectures, group discussions and hands-on examination of specimens. Guest speakers will be invited where possible. In general students will participate in a variety of activities ranging from group discussion of real cases to problem solving. Several field trips will be scheduled. The course syllabus may change during the course in order to take account of both student's and instructor's response to the course activities.

Learning Objectives

Students will learn about:

- The role of equids in society: past and present
- The biology and natural history of equids
- Common diseases and other health problems: treatment and prevention
- Common welfare concerns of modern day equids

Students will develop:

- Awareness of the diversity of factors relevant to our relationship with equids: how we view, interact with and care for them.
- Skills in critical thinking and problem solving.

- Communication skills through a mixture of methods: writing, discussing and presenting ideas and material in class and assignments

Instructor

Cathy Schuppli
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Office Hours: There will be no set office hours. Students are welcome to arrange individual appointments.

Teaching Assistant – Dax Atkinson
dax.atkinson@alumni.ubc.ca
Office Hours: TBA.

Text

- There is no required course textbook.
- Additional reading will be assigned throughout the course. These will be online PDFs or handouts.

Important Dates

Last day to change between Credit/D/Fail and percentage grading (grading options cannot be changed after this date): January 19, 2015

Last day to withdraw without a W standing : January 19, 2015

Last day to withdraw with a W standing
(course cannot be dropped after this date) : February 13, 2015

Evaluation

Anatomy Assignment	5%	January 22/27
Written Assignment: Behaviour	25%	February 10
5 Health Quizzes	14%	Various dates
Midterm: Health	25%	March 10
Written Assignment: Welfare	25%	April 13
Participation and Attendance	5%	
Debate	1%	

Anatomy Assignment- The class will be divided into groups. Each group will be assigned one topic in anatomy. This will be presented in class. Please send an electronic version to the course instructor for posting on Connect. **Assignments due January 22 and 27.**

Written Assignment - Behaviour

*Videos of feral and captive horses will be supplied. You will be expected to view and analyze the video (technique provided to you) using a standard behavioural ethogram (provided to you) for horses and develop of time budget. Your results will be used to make a comparison of feral and captive horses and hypothesize using literature why there might be differences. You will hand in approximately 3-4 pages of written material, worth 25% of your marks. **Assignment due Tuesday February 10.***

Quizzes

These will be short (10 minute) quizzes on topics from previous class. The aim of the quizzes is to keep you up-to-date with material in order to prepare for the midterm exam.

Midterm Exam

*You will be required to write one midterm exam covering material from the beginning of the year, but emphasizing health. **Tuesday March 10***

Written Assignment - The welfare of horses in different roles

*A list of topics will be provided and you will choose one (e.g. competitive dressage horse). Evaluate this use of horse based on the health and welfare of horses and provide recommendations for improvements. This is an evidence-based paper using peer-reviewed references to support your ideas. **Assignment due Monday April 13.***

Participation and Attendance

Participation and attendance in class are essential to learning in this course. Therefore, 5% of your mark will be determined by your attendance and participation in class discussions. It is essential to have done the readings for each class in order to maximize your ability to earn these marks and to be evaluated on your contribution.

- Students cannot submit written assignments electronically. Hard copies only.
- Assignments are due in (or before) class on the due date.
- Late assignments will lose **5% per day** (counting weekends).
- Missed exams require medical documentation as outlined by UBC policy.

Course Rules and Etiquette

We would like to foster a respectful class environment where everyone feels comfortable contributing to the class.

1. Students will be expected to arrive to class on time so as not to disturb the ongoing class. Arriving late on a regular basis will be penalized in participation marks.
2. Discussions should be carried out in a respectful manner: allow others to contribute, listen to others, be tolerant of the views of others and come prepared.
3. Suggestions for improvements to the course are welcome at all times.

Email:

1. Email communications with instructors should be limited to brief communications, for example setting up an appointment to meet face-to-face. Instructors will not engage in detailed discussions about course material or assignments. For your own benefit, these are much better dealt with face-to-face.
2. Information that is included in the course syllabus will not be discussed via email.

Plagiarism:

Plagiarism is the use of another person's words or ideas without proper citation and constitutes academic fraud. *It is the responsibility of each student in this course to know what counts as plagiarism and to avoid committing it.* Written work submitted in this course will sometimes be checked for plagiarism. Any offences will be reported to the Dean's office, for disciplinary action. If you have any questions about how to make proper use of sources please ask your instructors.

Please consult the following website and the UBC resource guide for more information.
<http://learningcommons.ubc.ca/resource-guides/avoiding-plagiarism/>

Date (2015)	Topic	Reading
Tuesday January 6	Introduction Evolution of the horse	
Thursday January 8	Horses in Society: History & Current	
Tuesday January 13	Biology and Natural History	Fureix, M. et al. 2012
Thursday January 15 (Last day to withdraw: January 19)	Behaviour - Ethogram Measuring Behaviour – Assignment preparation	McDonnell, 2003
Tuesday January 20		Swing class to compensate for necropsy
Thursday January 22	Anatomy MCML 170	Presentations
Tuesday January 27	Anatomy MCML 170	Presentations
Thursday January 29	Field trip to Southlands	Pony Meadows
Tuesday February 3	Health - Nutrition (Anatomy and Physiology)	Hintz and Cymabluk 1994
Thursday February 5	Health - Diet Formulation	Guest: Shelagh Niblock
Tuesday February 10	Health – Colic Quiz	Behaviour Assignment Due
Thursday February 12	Health - Reproductive Biology (Physiology, breeding, foaling)	England, G.C.W. 2005 Guest – Ian Welch
Midterm Break 16-21		
Tuesday February 24	Health - Infectious Diseases & Vaccination Quiz	
Thursday February 26	Health – Musculoskeletal: lameness and gait scoring Quiz	
Tuesday March 3	Health - Hoof anatomy, Laminitis Quiz	
Thursday March 5	Health – Parasitology Quiz	AEEP 2013
Tuesday March 10	Midterm	
Thursday March 12	Health - Pain Assessment and Recognition	Guest - Amelia MacRae
Tuesday March 17	Welfare - Husbandry and management	Christensen, 2011 Henry 2012 Malmkvist 2012 Søndergaard 2011 Thorne 2005
Thursday March 19	Welfare - Stereotypies	Sarrafcchi 2013
Tuesday March 24	Welfare - Slaughter & Transport	
Thursday March 26	Welfare - Racing	

Tuesday March 31	Welfare - NFACC and Horse Code	Guest - Dr. Bettina Bobsien NFFAC 2013
Thursday April 2	Welfare – Equitation Science	
Tuesday April 7	Welfare – Cruelty Investigations	Guest - BC SPCA Marcie Moriarty
Thursday April 9- Last Class	Debate – 2 topics	Summary of Topic Due
Exams April 14-29		Welfare Assignment Due April 13

References for Reading Material

- AAEP 2013. American Association for Equine Practitioners Parasite Control Guidelines. 24 p.
- Christensen, J. W., Søndergaard, E., Thodberga, K. & Halekohb, U. 2011. Effects of repeated regrouping on horse behaviour and injuries. *Applied Animal Behaviour Science* 133, 199– 206 .
- England G.C.W. 2005. Chapter 2 - Endocrinology of the Oestrous Cycle and Puberty In Fertility and Obstetrics in the Horse. 3rd Edition.
- Fureix, M. Bourjadec, S. Henry, C. Sankey, M. Hausbergera. **2012**. Exploring aggression regulation in managed groups of horses *Equus caballus*. *C. Applied Animal Behaviour Science* 138: 216– 228.
- Henry, S. et al. 2012. Adults may be used to alleviate weaning stress in domestic foals (*Equus caballus*). *Physiology & Behavior* 106, 428–438.
- Hintz H.F. and N. F. Cymbaluk 1994. Nutrition of the horse. *Annual Review of Nutrition*. 14:243-267
- Malmkvist, J., J.M. Poulsen, N. Luthersson, R. Palmec, J.W. Christensen, and E. Søndergaard. 2012. Behaviour and stress responses in horses with gastric ulceration. *Applied Animal Behaviour Science* 142: 160–167.
- McDonnell, S. 2003. *The Equid Ethogram: A Practical Field Guide to Horse Behavior*. Eclipse Press 300 p.
- NFACC 2013. National Farm Animal Care Council Code of Practice for the Care and Handling of Equines. A hard copy will be provided to each student.
- Sarrafchi A. and H.J. Blokhuis 2013. Equine stereotypic behaviors: Causation, occurrence, and prevention. *Journal of Veterinary Behavior* 8: 386-394.
- Søndergaard, E., M.B. Jensen, and C.J. Nicol. 2011. Motivation for social contact in horses measured by operant conditioning. *Applied Animal Behaviour Science* 132: 131–137.
- Thorne, J.B., D. Goodwin, M.J. Kennedy, H.P.B. Davidson, and P. Harris A. 2005. Foraging enrichment for individually housed horses: Practicality and effects on behavior. *Applied Animal Behaviour Science* 94: 149–164.