

# Course Outline Form: Winter 2018

## General Information

**Course Code:**

EQN\*2050

**Course Title:**

Introduction to Equine Nutrition (3-3)

**Course Description:**

Course introduces fundamental concepts of nutrition from a biochemical perspective. The biological roles of carbohydrates, lipids and proteins are studied as well as the role of metabolic pathways in maintaining equine health at the cellular, organ, and whole body levels. Diagnosis, management, and prevention of equine nutritional diseases are discussed.

**Credit Weight:**

0.5

**Academic Department (or campus):**

Department of Animal Biosciences

**Campus:**

Guelph

**Semester Offering:**

Winter

**Class Schedule and Location:**

Lectures: Monday/Wednesday 4:00 - 5:20 pm in ANNU 102 or 030 (TBA)

Labs: Wednesday 11:30 – 2:20 pm ANNU 102

## Instructor Information

Instructor Name: Renée Bergeron

Instructor Email: rbergero@uoguelph.ca

Office location and office hours: ANNU 150. Office hours: by appointment only.

Guest lecturer: Lee-Anne Huber

## GTA Information

GTA Name: Alexandra Rankovic

GTA Email: arankovi@uoguelph.ca

GTA office location and office hours: by appointment only

## **Course Content**

### **Specific Learning Outcomes:**

The students will:

- 1) Understand digestive anatomy and physiology of the horse and how they utilize feed
- 2) Understand nutrient metabolism and requirements in the horse
- 3) Understand common feedstuffs and recognize quality
- 4) Understand anti-nutritional factors in common feeds used in horses
- 5) Be able to widely evaluate feeding management and be able to recommend changes to the feeding program
- 6) Be able to predict required feed intake and balance basic rations

The course is designed to meet the following Learning Objectives of the University:

- 1) **Literacy:** Students will be required to understand introductory biochemistry and horse nutrition compiled in course notes and lecture material (power point slides).
- 2) **Understanding of Forms of Inquiry:** A major theme of this course will pertain to the process whereby information is obtained from a variety of sources and presented and interpreted from various perspectives.
- 3) **Depth and Breadth of Understanding:** This course will cross the boundaries of several conventional disciplines within the broad areas of nutrition, metabolism, physiology, feed technology, etc. Students will be encouraged to go beyond material discussed in class.
- 4) **Independence of Thought:** Emphasis will be placed on identifying and understanding the basis for current viewpoints. Inevitably, this results in challenges to orthodoxy.
- 5) **Love of Learning:** This course will be aimed at helping students to distinguish between education and training, and to ascribe value to both.

### **Lecture and Lab Content:**

Week	Date(s)	Topics
1	Jan 08 <sup>th</sup>	Introduction, Digestive system
	Jan 10 <sup>th</sup>	<i>No lab on first week</i>
	Jan 10 <sup>th</sup>	Carbohydrates
2	Jan 15 <sup>th</sup>	Lipids - Vitamins, minerals and water: part 1
	Jan 17 <sup>th</sup> – Lab 1	Anatomy of the gastrointestinal tract (GIT)
	Jan 17 <sup>th</sup>	Amino acids, proteins, enzymes
3	Jan 22 <sup>nd</sup>	Digestive physiology
	Jan 24 <sup>th</sup> – Lab 2	Overview of Excel for feed evaluation and formulation
	Jan 24 <sup>th</sup>	Digestive physiology
4	Jan 29 <sup>th</sup>	Digestive physiology
	Jan 31 <sup>st</sup> – Lab 3	Common nutrition calculations: part 1
	Jan 31 <sup>st</sup>	Vitamins, minerals and water: part 2
5	Feb 05 <sup>th</sup>	Nutrient metabolism
	Feb 07 <sup>th</sup> – Lab 4	Common nutrition calculations: part 2
	Feb 07 <sup>th</sup>	Nutrient metabolism
6	Feb 12 <sup>th</sup>	Nutrient metabolism
	Feb 14 <sup>th</sup> – Lab 5	<b>Application - lab assignment 1</b>
	Feb 14 <sup>th</sup>	Feed analysis
7	Feb 19 <sup>th</sup> , 21 <sup>st</sup>	READING WEEK/NO CLASSES
8	Feb 26 <sup>th</sup>	<b>Midterm during class hours</b>
	Feb 28 <sup>th</sup> - Lab 6	Body condition scoring
	Feb 28 <sup>th</sup>	Feed analysis <b>PRESENTATIONS, 2 groups (4 students)</b> <b>Summary due on Dropbox Feb 26<sup>th</sup> at 11:59</b>
9	Mar 5 <sup>th</sup>	Forage
	Mar 7 <sup>th</sup> - Lab 7	Proximate analysis calculations
	Mar 7 <sup>th</sup>	Forage <b>PRESENTATIONS, 2 groups (4 students)</b> <b>Summary due on Dropbox Mar 5<sup>th</sup> at 11:59</b>
10	Mar 12 <sup>th</sup>	Pasture management and plant poisoning
	Mar 14 <sup>th</sup> - Lab 8	Calculating feed and nutrient intake – part 1
	Mar 14 <sup>th</sup>	Feed ingredients <b>PRESENTATIONS, 2 groups (4 students)</b> <b>Summary due on Dropbox Mar 12<sup>th</sup> at 11:59</b>
11	Mar 19 <sup>th</sup>	Concentrates
	Mar 21 <sup>st</sup> - Lab 9	Calculating feed and nutrient intake – part 2 <b>Assignment 2 due at the end of lab</b>
	Mar 21 <sup>st</sup>	Energy and protein partitioning of feed <b>PRESENTATION, 2 groups (4 students)</b> <b>Summary due on Dropbox Mar 19<sup>th</sup> at 11:59</b>
12	Mar 26 <sup>th</sup>	Feeding horses at maintenance and performance horses
	Mar 28 <sup>th</sup> - Lab 10	Feed formulation – part 1

	Mar 28 <sup>th</sup>	Feeding a pregnant and lactating mare <b>PRESENTATION, 2 groups (4 students)</b> <b>Summary due on Dropbox Mar 26<sup>th</sup> at 11:59</b>
13	Apr 2 <sup>nd</sup>	Feeding young horses
	Apr 4 <sup>th</sup> - Lab 11	Feed formulation – part 2
	Apr 4 <sup>th</sup>	<b>PRESENTATION, 3 groups (6 students)</b> <b>Summary due on Dropbox Apr 2<sup>nd</sup> at 11:59</b>

**Seminars:**

Not applicable

**Course Assignments and Tests:**

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Laboratory assignments	Assignment 1; Feb 14 <sup>th</sup> , end of lab Assignment 2; Mar 21 <sup>th</sup> , end of lab Assignment 3; Apr 6 <sup>th</sup> , 5:30 pm	5% 5% 10%	Depth and breadth of understanding, love of learning
Midterm	February 14 <sup>th</sup> , in-class	25%	Literacy
Presentations <sup>1</sup>	Attendance – specified above Written – specified above Oral – specified above	5% 10% 10%	Understanding forms of inquiry and independence of thought
Final exam	April 19 <sup>th</sup> , 2:30 – 4:30 pm	30%	Literacy

<sup>1</sup> Topic selection and partner due January 23<sup>rd</sup> at 17:30. Order of presentations will be randomly selected in-class on January 24<sup>th</sup>.

**Additional Notes (if required):**

The lab room is equipped with computers; however students may bring their own computers if they wish.

**Laboratory assignments**

Assignments 1 and 2 will be due Feb 14<sup>th</sup> and Mar 21<sup>th</sup> at the end of the lab sessions, respectively.

Assignment 3 will be due April 6<sup>th</sup>, 5:30 pm via Courselink Dropbox.

Assignments handed in late will have 10% per day deducted.

**Final examination date and time:** April 19, 2018, 2:30 – 4:30 pm

**Final exam weighting:** The final exam will be worth 30% of the final mark and will be cumulative.

## **Course Resources**

### **Required Texts:**

Not applicable

### **Recommended Texts:**

None, but nutrition texts are available from the library if some concepts are not clear.

### **Lab Manual:**

None

### **Other Resources:**

Electronic copy of course notes, handout (copies of the PPTslides) and other material will also be posted on a weekly basis on the course website.

### **Field Trips:**

Not applicable

### **Additional Costs:**

Not applicable

## **Course Policies**

### **Grading Policies:**

Assignments and examinations will be graded in a timely fashion (within 14 days) and returned to the students (except the final exam) with personalized feedback and/or general feedback in class to highlight some of the shortcomings in the students' work or understanding of the concepts.

### **Course Policy on Group Work:**

For laboratory assignments, students may discuss concepts in groups, but assignments need to be handed in and will be marked for individual students.

For the presentation and summary, students will work in partners, in case of an odd number of students, the student can join another group or work alone. One presentation and summary are expected from each group and will be given the same marks.

### **Course Policy regarding use of electronic devices and recording of lectures:**

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

## **University Policies**

### **Academic Consideration:**

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

### **Academic Misconduct:**

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).

### **Accessibility:**

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the

University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS), formerly Centre for Students with Disabilities (CSD), as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email [sas@uoguelph.ca](mailto:sas@uoguelph.ca) or visit the [Student Accessibility Services website \(http://www.uoguelph.ca/csd/\)](http://www.uoguelph.ca/csd/).

### **Course Evaluation Information:**

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](#) for more information.

### **Drop period:**

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III \(Schedule of Dates\) of the Undergraduate Calendar](#).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII \(Undergraduate Degree Regulations and Procedures\) of the Undergraduate Calendar](#).