



EQN*2050 Introduction to Equine Nutrition

Winter 2023

Section(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - January 05, 2023

1 Course Details

1.1 Calendar Description

This 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.

Pre-Requisites: BIOL*1050
Restrictions: Registration in BBRM.EQM.

1.2 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.

1.3 Timetable

Lectures: Monday/Wednesday 10:00 am - 11:20 am, ANNU room 204

Labs: Wednesday 2:30 pm - 5:20 pm, ANNU room 102

Timetable is subject to change. Please see WebAdvisor for the latest information.

1.4 Final Exam

Tuesday April 18, 2023 - 8:30 am - 10:30 am, Location: TBA

Exam time and location is subject to change. Please see WebAdvisor for the latest

information.

Note: In-person, seated exam

2 Instructional Support

2.1 Instructional Support Team

Instructor: Lee-Anne Huber
Email: huberl@uoguelph.ca
Telephone: +1-519-824-4120 x53347

2.2 Teaching Assistants

Teaching Assistant (GTA): Maddy Watzeck
Email: mwatzeck@uoguelph.ca
Office Hours: Please email for appointments.

2.3 Special notes for virtual learning

Please note that EQN2050 is currently slotted for in-person instruction. However, should any circumstances arise that interfere with in-person learning (e.g., inclement weather), lectures and labs may be provided virtually via Zoom in CourseLink or MS Teams during the assigned timeslots.

Announcements: The instructor will use Announcements on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor or TA.

Email: If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will attempt to respond to your email within 24 hours.

Video Call: If you have a complex question you would like to discuss with your instructor, you may book a video meeting on Zoom (or alternate platform being used by your instructor). Video meetings depend on the availability and are booked on a first come first served basis.

Technologies and synchronous delivery:
This course may use a variety of technologies including;

CourseLink (main classroom)
Zoom (integrated with CourseLink)

To help ensure you have the best learning experience possible, please review the list of system and software requirements.

<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

<http://spaces.uoguelph.ca/ed/system-requirements/>

<https://courselink.uoguelph.ca/d2l/systemCheck>

Course Technologies

CourseLink

This course is being offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). By using this service, you agree to comply with the University of Guelph's Access and Privacy Guidelines. Please visit the D2L website to review the Brightspace privacy statement and Brightspace Learning Environment web accessibility standards.

<http://www.uoguelph.ca/web/privacy/> <https://www.d2l.com/legal/privacy/>

<https://www.d2l.com/accessibility/standards/>

Technical Support

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support. Email: courselink@uoguelph.ca

Tel: 519-824-4120 ext. 56939 Toll-Free (CAN/USA): 1-866-275-1478

Support Hours (Eastern Time):

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

Zoom

This course will use Zoom for lectures. Check your system requirements to ensure you will be able to participate.

<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

Technical Skills

As part of your learning experience, you are expected to use a variety of technologies for assignments, lectures, teamwork, and meetings. In order to be successful in this course you will need to have the following technical skills:

Manage files and folders on your computer (e.g., save, name, copy, backup, rename, delete, and check properties);

Install software, security, and virus protection;

Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;

Be comfortable uploading and downloading saved files;
 Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
 Navigate the CourseLink learning environment and use the essential tools, such as Dropbox, Quizzes, Discussions, and Grades (the instructions for this are given in your course);
 Access, navigate, and search the Internet using a web browser (e.g., Firefox, Internet Explorer); and
 Perform online research using various search engines (e.g., Google) and library databases.
 Contact your course instructor if you need support with any of the above.

Netiquette Expectations

The course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply. Inappropriate behaviour will not be tolerated. Examples of inappropriate online behaviour include:
 Posting inflammatory messages about your instructor or fellow students;
 Using offensive language;
 Copying or presenting someone else's work as your own;
 Adapting information from the Internet without using proper citations or references;
 Buying or selling term papers or assignments;
 Posting or selling course materials to course notes websites;
 Having someone else complete your quiz or completing a quiz for/with another student;
 Stating false claims about lost quiz answers or other assignment submissions;
 Threatening or harassing a student or instructor;
 Discriminating against fellow students, instructors, and/or TAs;
 Using the course website to promote profit-driven products or services;
 Attempting to compromise the security or functionality of the learning management system;
 and
 Sharing your username and password.

Dropbox Submissions

Assignments should be submitted electronically via the online Dropbox tool. When submitting your assignments using the Dropbox tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommends you save your assignments to a cloud-based file storage (e.g., OneDrive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

It is your responsibility to submit your assignments on time as specified on the Schedule. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that technical difficulty is not an excuse not to turn in your assignment on time. Don't wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support.

<http://spaces.uoguelph.ca/ed/contact-us/>

Late Policy

If you choose to submit assignments to the Dropbox tool late, the full allocated mark will be reduced by 10% per day after the deadline for the submission of the assignment to a limit of six days at which time access to the Dropbox folder will be closed.

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well before the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return graded materials to you in the shortest possible time.

Grades and Feedback

Unofficial assessment marks will be available in the Grades tool of the course website.

Your instructor will attempt to have grades posted online within 2 weeks of the submission deadline, if the assignment was submitted on time. Once your assignments are marked you can view your grades on the course website by selecting Grades from the Tools dropdown menu on the navbar. Your course will remain open to you for seven days following the last day of the final exam period.

University of Guelph students can access their final grade by logging into WebAdvisor (using your U of G central ID).

<https://webadvisor.uoguelph.ca>

3 Learning Resources

3.1 Required Resources

Required Texts (Textbook)

Not applicable

3.2 Recommended Resources

Recommended Texts (Textbook)

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

3.3 Additional Resources

Lab Manual (Lab Manual)

None

Other Resources (Other)

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.

3.4 Field Trip

Not applicable

3.4 Additional Costs

Not applicable

3.4 Library Access

As a student, you have access to the University of Guelph's library collection, including both physical and electronic materials. For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library's website.

If you are studying off campus and would like to access the library's electronic resources, use the Off Campus Login and login using your Single Sign On credentials or using your last name and library barcode.

<https://www.lib.uoguelph.ca/>

<https://www.lib.uoguelph.ca/campus-login>

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

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

4.2 University Learning Objectives

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.

5 Teaching and Learning Activities

5.1 Lecture

Jan 9

Topics: Introduction, Digestive system

Jan 11

Topics: Carbohydrates/Lipids

Jan 16

Topics: Amino acids, proteins, enzymes

Jan 18

Topics:	Vitamins, minerals and water: part 1
Jan 23	
Topics:	Vitamins, minerals and water: part 2
Jan 25	
Topics:	Digestive physiology
Jan 30	
Topics:	Digestive physiology
Feb 1	
Topics:	Nutrient metabolism
Feb 6	
Topics:	Nutrient metabolism
Feb 8	
Topics:	Feed analysis
Feb 13	
Topics:	Feed analysis
Feb 15	
Topics:	MIDTERM, in-class
Feb 27	
Topics:	Forage
Mar 1	
Topics:	Forage
Mar 6	

Topics: Feed ingredients and processing

Mar 8

Topics: Feed ingredients and processing

Mar 13

Topics: **NO CLASS**

Mar 15

Topics: **NO CLASS**

Mar 20

Topics: Pasture management and plant poisoning

Mar 22

Topics: Energy and protein utilization of feed

Mar 27

Topics: Feeding horses at maintenance and performance horses

Mar 29

Topics: **NO CLASS**

Apr 3

Topics: Feeding a pregnant and lactating mare

Apr 5

Topics: Feeding young horses

Feeding donkeys (tentative)

5.2 Seminar

Topics: Not applicable

5.3 Lab

Jan 11

Topics: **No lab in week 1**

Jan 18

Topics: **Excel workshop – unit conversions**

Jan 25

Topics: **Common nutrition calculations: Forages**

Feb 1

Topics: **Common nutrition calculations: Concentrates**

Feb 8

Topics: **Application - Lab Assignment 1 - Due at the end of lab session**

Feb 15

Topics: **How to find scientific information**

Mar 1

Topics: **Excel – calculating feed and nutrient intakes + body condition scoring – part 1**

Mar 8

Topics: **Excel - calculating feed and nutrient intakes – part 2**

Lab Assignment 2 due at the end of lab

Mar 15

Topics: Feed formulation – introduction to Lab Assignment 3

Mar 22

Topics: Lab assignment 3 – work period

Mar 29

Topics: Lab assignment 3 - work period - due in Dropbox Mar 29 at 5 pm

Apr 5

Topics: Final discussion with the professor

6 Assessments

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Lab Assignment 1	10
Lab Assignment 2	10
Lab Assignment 3	15
Midterm Exam	20
Written Summary	15
Final Discussion	10
Final Exam	20
Total	100

6.2 Assessment Details

Lab Assignment 1 (10%)

Date: Feb 8, Submit in-lab

Learning Outcome: 1

Lab Assignment 2 (10%)

Date: Mar 8, Submit in-lab

Learning Outcome: 2

Lab Assignment 3 (15%)

Date: Mar 29, Submit via dropbox; 5 pm

Learning Outcome: 3, 5, 6

Midterm Exam (20%)

Date: Feb 15, in-class

Learning Outcome: 1, 2

Written Summary (15%)

Date: Mar 24, Submit via dropbox; 11:59 pm

Learning Outcome: 1, 2, 5

Topic and partner selection due Feb 1 at 5 pm.

Final Discussion (10%)

Date: Apr 5, In lab

Learning Outcome: 1, 2, 3, 5

Discuss your final paper with the professor

Final Exam (20%)

Date: Tue, Apr 18, 8:30 AM - 10:30 AM, TBD

Learning Outcome: 1, 2, 3, 4, 5, 6

6.3 Late Policy

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

7 Course Statements

7.1 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.

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

7.3 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.

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website

<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website

<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 Academic Integrity

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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website

(<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

8.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campusess/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campusess/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
