

# ANSC\*4290 - Swine Nutrition

## Fall 2024 Course Outline

Section: 01

Credits: 0.50

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## Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

## Calendar Description

This course is designed to explore details of evaluating feed ingredients and formulating diets for swine. Students will use models to evaluate various aspects of nutrient partitioning for growth and reproduction in pigs.

**Prerequisite(s):** ANSC\*3120

**Department(s):** Department of Animal Biosciences

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## Course Description

This is a course designed to explore details of evaluating feed ingredients and feeding programs for swine, as well as the use of pigs as models for other non-ruminant animals and humans, to better understand nutrition concepts. Students will use models to evaluate aspects of nutrient partitioning for growth and reproduction in swine.

## Course Fit Within Program/Curriculum

Students will apply digestive physiology concepts taught in previous courses to evaluating and creating feeding programs for swine.

## Lecture Schedule

MonFri 4pm-5:20pm in ROZH\*107 (9/5 to 12/13)

## Instructor Information

**Brenda Christensen**

Email: christeb@uoguelph.ca

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## Additional Support

**Announcements:** The instructor will use the **Announcements** on the course home page to provide you with course reminders and updates. Please check this sections frequently for course updates.

**Office hours:** Office hours can be arranged via email and held on Teams or in-person.

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

**In-person meetings or video calls:** if you have a complex question you would like to discuss with your instructor, you may book a meeting. Meetings will depend on instructor availability and are booked on a first come first served basis.

## Textbooks

Group	Title	Author	ISBN
Optional	Nutrient Requirements of Swine	National Research Council (U.S.). Committee on Nutrient Requirements of Swine	9780309224239, 0309224233
Optional	Sustainable Swine Nutrition		9781119583936, 1119583934

## Learning Resources

### Required Resources

Course Content: will be posted on Course link

Assignment guidelines: Assignments will be discussed in class and rubrics and further instructions (including examples when applicable) will be posted on Course link.

### Course Resources

*Library Access: As a student you have access to the University of Guelph's library collection, including both physical and electronic materials. **You will need this resource to complete your literature review assignment.** For information on checking out of couriating physical library items, accessing electronic journals and returning items to the library, visit the library's website. If you are working off campus you can access the library's electronic resources by using 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/>

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

### Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

## Library Course Reserve (Ares)

For this course, you will be required to access course reserve materials through the University of Guelph McLaughlin Library. To access these items, select **Ares** on the navbar in CourseLink. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit [How to Get Course Reserve Materials \(https://www.lib.uoguelph.ca/find/course-reserves-ares/\)](https://www.lib.uoguelph.ca/find/course-reserves-ares/).

If at any point during the course you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621 | Email: [libres2@uoguelph.ca](mailto:libres2@uoguelph.ca) | Location: McLaughlin Library, First Floor, University of Guelph

## Course Learning Outcomes

1. Become familiar with means to evaluate and manipulate the feeding value of swine feed ingredients.
2. Become familiar with the basic concepts of nutrient utilization for growth and reproduction in swine.
3. Develop skills to critically evaluate swine feeding programs, including preparation of reports.
4. Develop awareness of current issues, challenges and opportunities in swine nutrition, including use of pigs as models for other non-ruminant animals and humans to better understand nutrition concepts.
5. Cultivate a basis for continued acquisition of knowledge and further development of skills in swine and non-ruminant nutrition.

## Teaching and Learning Activities

### Weekly Activities

*Fri Sept 6: Lecture 1: Course Introduction & Digestive anatomy and physiology*

Mon Sept 9: Lecture 2: Nutrients and anti-nutrients; Nutrient availability I  
 Fri Sept 13: Lecture 3: Nutrients and anti-nutrients; Nutrient availability II  
 Mon Sept 16: Lecture 4: Principals of nutrient partitioning for growth and reproduction I  
 Fri Sept 20: Lecture 5: Principals of nutrient partitioning for growth and reproduction II  
 Mon Sept 23: How to construct a literature review  
 Fri Sept 27: Lecture 6: Feed Ingredients I  
 Mon Sept 30: Lecture 7: Feed Ingredients II  
 Fri Oct 4: Lecture 8: Feed Processing  
 Mon Oct 7: Review Session  
 Fri Oct 11: Midterm (written, in class)  
 Mon Oct 14: No Class  
 Fri Oct 18: Introduction to lab assignment and the NRC  
 Mon Oct 21: Supervised lab work period  
 Fri Oct 25: Lecture 9: Integrated Nutrition: birth-25kg I  
 Mon Oct 28: Student Presentations  
 Fri Nov 1: Lecture 10: Integrated Nutrition: birth-25kg II  
 Mon Nov 4: Supervised lab work period  
 Fri Nov 8: Lecture 11: Integrated Nutrition: grow to finish  
 Mon Nov 11: Review Paper Supervised Work Session  
 Fri Nov 15: Career Paths in the Swine Industry- Margaret Henry, OMAFRA, Swine Specialist  
 Mon Nov 18: Lecture 12: Integrated Nutrition: sow nutrition  
 Fri Nov 22: Practical Industry Nutrition Challenges- Victoria Stewart; MFS  
 Mon Nov 25: Lecture 13: Current Swine Nutrition Research  
 Fri Nov 29: TBD

## Assessment Breakdown

Description	Weighting (%)	Due Date
Midterm	20%	October 11 2024
Review Topic Presentation	10%	October 28, 2024
NRC Modeling Lab	15%	November 4, 2024
Literature Review	25%	November 21, 2024
Final Exam	30%	December 12, 2024

## Assessment Details

### Midterm

#### Midterm

Midterm will be in class and covering lectures 1-8

Course Learning Outcomes Assessed: 1, 2, 4, 5

20

### Presentation

#### Review Topic Presentation

Partners will put together short 4-5 min presentation outlining their review topic, background information, review outline, with references

Slides are to be submitted via dropbox on courselink prior to class on Oct 28

Sept 20th by 9pm: Select a partner and a topic for the literature review and email to course instructor- topics cannot overlap with other groups and will be on a first come first served basis.

Course Learning Outcomes Assessed: 4, 5

10

### Lab Assignments

#### NRC Modeling Lab

Course Learning Outcomes Assessed: 1, 2, 3

15

## Literature Review

### Literature Review

25

Become Familiar with relevant scientific literature on one specific aspect of swine nutrition. Work in pairs to identify relevant aspect of pig nutrition, identify and interpret appropriate scientific literature and a critical analysis review paper. Further details will be discussed in class and posted on courselink

Course Learning Outcomes Assessed: 2, 4, 5

### Exam

#### Final Exam

30

The exam will be split into two sections, the first on all content from the course with a focus on application and critical thinking. The second section will be specific to the literature review you submitted

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

## Final Exam

Date: Dec 12

Time: Th 8:30am-10:30am

Location: TBA *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

## Last Day to Drop Course

The final day to drop Fall 2024 courses without academic penalty is the last day of classes: November 29

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

## Course Grading Policies

### Submission of Assignments

Assignments will 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 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 backup of all 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 (i.e., OneDrive), or on an external hard drive or USB, or sending a copy of it to your email account, so that if something were to happen to your computer, the assignment can still be submitted or re-submitted on time.

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 a reason to turn assignments in late**. Don't wait until the last minute as you may get behind in your work.

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

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

### Late Assignment

If you choose to submit an assignment late, the full mark allocation will be reduced by **10% per day after the deadline for submission of the assignment to a limit of two days after which late submission will not be accepted and a mark of 0% will be given.**

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension **you must discuss with your instructor as soon as possible and prior to the submission deadline**. 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 all students have the same amount of time to work on assignments, and to help return marked materials to you in a timely manner and prior to mark deadlines enforced by the University.

## Artificial Intelligence Systems, ChatGPT and Academic Integrity

Artificial intelligence (AI) systems are powerful tools that promise to revolutionize research, teaching and learning. In all three areas and in the future of work, there exist creative and forward-thinking opportunities for the use of AI.

At the same time, the development of increasingly sophisticated AI systems such as ChatGPT poses potential threats to academic integrity. Unauthorized student use of AI systems undermines student learning, the achievement of learning outcomes and violates the University's academic misconduct policies.

The University is committed to ensuring that the use of AI in teaching and learning complies with existing policies and regulations that govern academic and scholarly integrity. We continue to engage the University community, including students, as we work to refine academic integrity policies and their intersection with AI tools. We affirm the following:

1. Students' work must reflect their unique intellectual capacity and demonstrate the application of critical thinking and problem solving. Unauthorized use of AI to complete assessments (i.e., Lab reports or literature review) violates the fundamental intellectual purposes of the University and does not demonstrate student achievement of course learning objectives.
2. Submission of materials completed by or with significant help of AI, without permission of the instructor, constitutes an offence under the University's academic misconduct policies, either as a form of plagiarism or the use of unauthorized aids.
3. Acceptable use of AI should be determined by the course instructor and may vary across disciplines, programs and types of assessments. In setting out course requirements and assessment criteria, the instructor should specify allowable uses of AI, if any through the course outline and/or the learning management system (e.g., Courselink) Clarity about the acceptable use of AI is critical for students and instructors. **Students are responsible for appropriately referencing how and to what extent they have used AI in assessments in keeping with University and course requirements**

## Course Standard Statements

### Course Policies

#### Group Work

Students working together for the literature review assignment will be given the same make, unless students within the group all agree-in writing- to an uneven distribution of marks. Questions will be asked on the final exam based on the literature review submitted, so students should be familiar with the content from the entire literature review. Students should work together to establish expectations and dates to complete work by to allow enough time for revisions from all group members. Should students fail to meet group expectations send an email to the instructor to discuss.

### Course Technology Requirements

*This course uses a variety of technologies including; Courselink (main classroom), MSTeams, Zoom*

*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/systems-and-software-requirements>

#### Technical Support

*If you need any assistance with the software tools of the Courselink website, contact Courselink Support*

*emails: [courselink@uoguelph.ca](mailto:courselink@uoguelph.ca)*

*Tel: 519-824-4120 ext. 56393 Toll-Free (CAN/USA): 1-866-275-1478*

*Support Hours (Eastern Time)*

*Mon-Fri: 8:30am-8:30pm*

*Sat: 10:00am-4:00pm*

*Sun: 12:00pm-6:00pm*

## Standard Statements for Undergraduate Courses

### 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 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.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

### 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 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

### Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

### 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.

### 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 undergraduate students 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 the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

### Email Communication

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

### Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigation/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

## **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).

## **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.

## **Resources**

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

## **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. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)