



ANSC*4280 - Poultry Nutrition

Fall 2026 Course Outline

Section: 01

Credits: 0.50

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 evaluate basic and applied poultry nutrition. Students will learn nutrient requirements of poultry, feeding value of ingredients used in poultry feed formulation and how feeding affects the environment, growth, reproduction, health, and composition of poultry products for human consumption.

Prerequisite(s): ANSC*3120

Department(s): Department of Animal Biosciences

Lecture Schedule

TuTh 10am-11:20am in MCKN*228 (9/10 to 12/22)

Instructor Information

Elijah Kiarie

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Florence Nyaga

GTA

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Textbooks

Group	Title	Author	ISBN
Suggested	Commercial Poultry Nutrition	S. Leeson, J.D. Summers	1899043381
Suggested	Feeds and Feeding	T. W. Perry, A. E. Cullison and R. S. Lowrey.	978-0130970473

Learning Resources

Technical Skills

As part of your learning experience, you must use various technologies for assignments, lectures, teamwork, and meetings. 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.

Required Resources

Course Technologies and Technical Support (Software)

This course will use a variety of technologies, including;

- CourseLink (primary classroom)
- MS Teams (via Office 365)
- Feed formulation software

Please review the system and software requirements (<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>) to help ensure you have the best learning experience possible.

CourseLink

This course is offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). 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 (<https://www.uoguelph.ca/web/privacy/>) and Brightspace Learning Environment web accessibility standards (<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): 1-866-275-1

MS Teams (via Office 365)

Office 365 Teams is a collaboration service that provides shared conversation spaces to help teams coordinate and communicate information. This course will use Teams for one on one meetings with your Instructor. It is recommended that you use the desktop version of Teams. As a student, you must learn how to use Teams and its features.

For Teams Support, visit the CCS website (<https://uoguelphca.sharepoint.com/sites/ccs/SitePages/services/office365teams.aspx>) for more information.

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.

Cost of Textbooks and Learning Resources

Textbook / Learning Resource	Required / Recommended	Cost
Commercial Poultry Nutrition Authors: S. Leeson, J.D. Summers ISBN: 1899043381	Suggested	from: \$108.48 on Amazon
Feeds and Feeding Authors: T.W. Perry, A.E. Cullison and R.S. Lowrey ISBN: 978-0130970473	Suggested	from: \$84.19 on Thriftbooks

Students are advised that prices are often determined by the publisher or bookstore and may be subject to change.

Field Trip Fees

For those courses in the Department of Animal Biosciences that have a field trip component - an associated fee for each field trip in the amount of \$20.00 will apply. Further details on how these fees will be collected will be provided in class/on CourseLink; along with a waiver form that will need to be completed prior to the trip(s).

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/>).

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 | Location: McLaughlin Library, First Floor, University of Guelph

Course Learning Outcomes

1. Appreciate anatomical and physiological factors that influences feeding and nutrient requirements in poultry
2. Understand nutrients requirements for poultry and feeding strategies used in raising poultry for meat and egg production
3. Understand feedstuffs used in poultry feeding, their evaluation and potential limitations, processing and complete feed manufacture
4. Appreciate application of least cost feed formulation in the development of poultry feeding program
5. Appreciate emerging areas of interest and concern in poultry feeding and nutrition.
6. Critically evaluate the scientific and technical literature related to poultry feeding and nutrition.
7. Demonstrate proficiency on personal and professional integrity by respecting diverse points of view and the intellectual contribution of others in a group discussion

Course Level Learning Outcomes

Understand nutrients requirements for poultry and feeding strategies used in raising poultry for meat and egg production

Schedule of Topics and Assignments

Day	Date	Topic	Activities	Due
Thu	9/10	Course Introduction E. Kiarie	Lecture 1	
Tue	9/15	Avian digestive tract anatomy and physiology E. Kiarie	Lecture 2	
Thu	9/17	Avian digestive tract anatomy and physiology E. Kiarie	Lecture 3	
Tue	9/22	Nutrients and anti-nutrients, nutrient availability E. Kiarie	Lecture 4	
Thu	9/24	Nutrients and anti-nutrients, nutrient availability E. Kiarie	Lecture 5	
Tue	9/29	Nutrients and anti-nutrients, nutrient availability E. Kiarie	Lecture 6	
Thu	10/1	Content Test 1 (20 % of Final Grade) E. Kiarie and F. Nyaga	Courselink quiz in class - bring own PC to class	
Tue	10/6	Feed ingredients E. Kiarie	Lecture 7	

Thu	10/8	Feed ingredients E. Kiarie	Lecture 8
Tue	10/13	Fall Study Break	
Thu	10/15	Feed ingredients E. Kiarie	Lecture 9
Tue	10/20	Application of in-ovo technology in poultry production Dr. Ernest Gasarabwe	Lecture 10
Thu	10/22	Laboratory 1: Nutrient analyses Florence Nyaga	Concepts demonstration Laboratory 1 : Feed Nov 5; 11:59 PM via Dropbox23 analyses
Tue	10/27	Feed manufacturing: processing, formulation E. Kiarie	Lecture 11
Thu	10/29	Feed manufacturing: processing, formulation E. Kiarie	Lecture 12
Tue	11/3	Content test 2 (20 % of Final Grade) E. Kiarie and Florence Nyaga	Courselink quiz in class - bring own PC to class
Thu	11/5	Laboratory 2: Feed manufacturing: particle size measurement demo Florence Nyaga	Concepts demonstration: Laboratory 2: Feed Nov 17; 11:59 PM via Dropbox23 manufacturing and formulation
Tue	11/10	Integrated layer nutrition Dr. Melissa Williams	Lecture 13
Thu	11/12	Integrated layer nutrition Dr. Melissa Williams	Lecture 14
Tue	11/17	Integrated broiler nutrition Dr. Lisa Hodgins	Lecture 15
Thu	11/19	Integrated broiler nutrition Dr Lisa Hodgins	Lecture 16
Tue	11/24	Ontario poultry industry and opportunities for students Mr. Al Dam	Lecture 17
Thu	11/26	No Class	
Tue	12/1	Content test 3 (20 % of Final Grade) E. Kiarie and Florence Nyaga	Courselink quiz in class - bring own PC to class
Thu	12/3	No Class	
Tue	12/8	No Class	
Thu	12/10	No Class	
Tue	12/15	No Class	
Thu	12/17	No Class	

Additional Information

Lectures

Role in the course: Present topics relevant to course objectives in an organized lecture format (see lecture schedule), accompanied by relevant class handouts. Development of student/professor dialogue (chats, emails, MsTeams) within the lecture format or after review of lecture materials will be encouraged

Student responsibility: Appropriate background reading to understand lecture material; ask questions to clarify concepts.

Laboratories

Role in the course: To appreciate some of the methods and tools used for chemical analyses of poultry feeds, feed formulation; feed manufacturing; and quality control

Student's responsibility: Listen to the video, review lectures and independently complete take-home assignments and laboratory exercises

Guidelines

- Lab manuals and other documents to support laboratory exercises will be posted in the Dropbox of CourseLink and accessible throughout the term

Assessment Breakdown

Description	Weighting (%)	Due Date
Content Test 1 (Lectures 2-6)	20	In class, Oct. 1
Laboratory 1: Nutrient analyses	15	Nov. 5; 11:59 PM via Dropbox
Content Test 2 (Lectures 7-12)	20	In class, Nov. 3
Laboratory 2: Feed manufacturing	15	Nov. 17; 11:59 PM via Dropbox
Content test 3 (Lectures 13-17)	20	In class, Dec. 1
Take home assignments	10	Variable

Assessment Details

Tests

Content Test 1 **20**

Course Learning Outcomes Assessed: 1, 2

Lab Assignments

Laboratory 1 **15**

Course Learning Outcomes Assessed: 2, 3

Tests

Content Test 2 **20**

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

Lab Assignments

Laboratory 2 **15**

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

Tests

Content Test 3 **20**

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

Assignment

Take Home assignments **10**

Course Learning Outcomes Assessed: 5, 6, 7

Last Day to Drop Course

The final day to drop Fall 2026 courses without academic penalty is the last day of classes: December 04

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 should be submitted electronically via the online **Dropbox** tool. Do not leave the page when submitting your assignments using the Dropbox tool until your assignment has been successfully uploaded. To verify that your submission was complete, you can view the submission

history immediately after the upload to see which files were uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a backup copy of all of your assignments in the event that they are lost in transition. 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.

You are responsible for submitting 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 get in touch with your instructor or CourseLink Support.

Late Assignment

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 two 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 marked materials to you in the shortest possible time.

Group work

For all assignments, students are encouraged to consult, but assignments need to be handed in and will be marked for individual students.

Grading Policies

Identical individual projects: Plagiarism will be strongly suspected if two or more students submit individual projects that are substantially identical, whether in the text of the initial overview sections, the choice of strengths and weaknesses discussed or the selection of supporting references.

Quotation and references: Plagiarism has occurred if the author does not place quotation marks around word-for-word copying of print or electronic format source material even if the source is correctly cited. To further reduce the possibility that a quotation will be misrepresented or mistaken as one's own work, direct quotations should be italicized where used. Such direct quotations should be used sparingly at most.

Degree of fidelity to source: Plagiarism has occurred if the author's writing is recognizable as essentially derived from cited or uncited print or electronic format sources, even though the author has altered the original source material by inverting word or sentence order, or substituting synonyms. Authors should summarize and synthesize ideas and concepts rather than interchange words. Failure to follow these guidelines will result in the referral of the offending students to the Associate Dean of O.A.C., who will assign the appropriate penalty.

Grading 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 is 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 (<https://www.uoguelph.ca/webadvisor/>) (using your U of G central ID).

Course Standard Statements

Use of electronic devices and recording of Lectures

Electronic recording of classes is expressly forbidden without the 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.

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.

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 business days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). 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/navigators>) 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/>)