



ANSC*4280 Poultry Nutrition - DRAFT

Fall 2017

Sections(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - August 31, 2017

1 Course Details

1.1 Calendar Description

This course is designed to evaluate nutrient requirements of poultry. Students will learn how to apply feeding programs for meat, laying birds and breeders and how feeding affects poultry meat and egg composition.

Pre-Requisite(s): ANSC*3120

1.2 Course Description

The course is designed to evaluate the nutrient requirements of poultry, the feeding value of ingredients used in poultry feed formulation and how feeding affects poultry growth and reproduction, health and composition of poultry products for human consumption

1.3 Timetable

Class Schedule and Location: Tuesdays and Thursdays 10:00 a.m. - 11:20 a.m.. ANNU Room 204

1.4 Final Exam

Date: December 13, 2017

Time: 14:30 to 16:30

Venue: MCLN 101

2 Instructional Support

2.1 Instructor(s)

Jim Atkinson

Email: jlaaps@gmail.com
Telephone: +1-519-824-4120 x53716
Office: ANNU 228

Office Hours: Thursday 1:00 p.m. - 3:00 p.m.; Friday 9:00 a.m. - 12:00 p.m.

Elijah Kiarie

Email: ekiarie@uoguelph.ca
Telephone: +1-519-824-4120 x53746
Office: ANNU 226

2.2 Teaching Assistant(s)

Name	Details
Haley Leung Master's by thesis	hleung03@uoguelph.ca Students are asked to email for appointment times.

3 Learning Resources

3.1 Recommended Resources(s)

Scott's Nutrition of the Chicken, 4th Edition, 2001. S. Leeson and J.D. Summers, University Books, Guelph, Ontario. (Textbook)

3.2 Additional Resources(s)

Poultry Science, British Poultry Science, Journal of Applied Poultry Research, World's Poultry Science Journal (Other)

4 Learning Outcomes

4.1 Course Learning Outcomes

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

1. Appreciate anatomical and physiological factors which influence 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 scientific and technical literature related to poultry feeding and nutrition:
-

5 Teaching and Learning Activities

5.1 Lecture Schedule

Week	Schedule
Thursday, September 7, 2017	Course introduction, overview of avian anatomy and physiology, emphasizing digestion and nutrient availability- J. Atkinson
Tuesday, September 12, 2017	Overview of avian anatomy and physiology, emphasizing digestion and nutrient availability- J. Atkinson
Thursday September 14, 2017	Introductory lecture: reading the literature critically- E. Kiarie
Tuesday September 19, 2017	Energy - J. Atkinson
Thursday, September 21, 2017	Energy - J. Atkinson
Tuesday, September 26, 2017	Protein and amino acids - J. Atkinson
Thursday, September 28, 2017	Protein and amino acids - J. Atkinson
Tuesday, October 3, 2017	Feed manufacturing: feedstuffs - J. Atkinson
Thursday, October 5, 2017	Feed manufacturing: feedstuffs, formulation, processing - E. Kiarie
Tuesday October 17, 2017	Group A 1st Review paper - E. Kiarie
Thursday, October 19, 2017	Group B 1st Review paper - E. Kiarie
Tuesday, October 24, 2017	Minerals, micro-nutrients and additives - J. Atkinson
Thursday, October 26, 2017	Nutrients deficiencies, toxicity -Guest- Ms. Anastasia Novy/Senior DVM student/UofG
Thursday, November 2, 2017	Integrated broiler nutrition - Guest- Ms. Lisa Hodgins/Monogastric Nutritionist/New-Life Mills

Week	Schedule
Tuesday, November 7, 2017	Integrated broiler nutrition - Guest- Ms. Lisa Hodgins/Monogastric Nutritionist/New-Life Mills
Thursday November 9, 2017	Integrated layer nutrition - Guest- Dr. David Trott/Manager for Nutrition & Technical Services/ Wallenstein Feeds & Supply Ltd
Tuesday November 14, 2017	Integrated layer nutrition - Guest - Dr. David Trott/Manager for Nutrition & Technical Services/ Wallenstein Feeds & Supply Ltd
Thursday, November 16, 2017	Nutrient related metabolic disorders - J. Akinson
Tuesday, November 21, 2017	Group A 2nd Review paper - E. Kiarie
Thursday, November 23, 2017	Group B 2nd Review paper - E. Kiarie
Tuesday, November 28, 2017	Topics in poultry nutrition-Industry perspectives - Guest- Dr. Greg Page, Trouw nutrition, Guelph
Thursday, November 30, 2017	Last day of class, course review, questions and answers - J. Atkinson

5.2 Laboratory Schedule

Week	Schedule
Thursday, October 12, 2017	Laboratory demonstration: Feed particle size analyses
Tuesday, October 31, 2017	Commercial feed manufacturing: Wallenstein feed and supply

5.3 Learning Activities, Role of Activity in Course, and Student Responsibility

Learning Activity	Role of Activity in Course	Student's responsibility
Lectures	Presentations of topics relevant to course objectives in an organized lecture format (see lecture schedule), accompanied by relevant class handouts. Development of student/professor dialogue within the lecture format will be	Appropriate background reading in preparation for participation in class-room discussion.

encouraged.

Laboratory exercises, least cost feed formulation

FURTHER DETAIL

TO BE PROVIDED

Understand and apply concepts of least cost feed formulation, feedstuffs processing and mixing efficiency

Work independently to complete laboratory exercises and submit for grading

Review paper OR critical analyses of feeding manufacturing processing and feed particle size

FURTHER DETAIL

TO BE PROVIDED

Become familiar with relevant scientific literature on one specific aspect of poultry nutrition.

OR

Understand the fundamentals of feed manufacturing operations, good feed manufacturing practices and importance of optimal feed particle size in poultry nutrition

Work independently or in pairs to identify a relevant aspect of poultry nutrition, identify and interpret appropriate scientific literature and write a critical analyses review paper.

OR

Join designated feed mill tour on October 11, working in a group of 2 or 3 gather relevant information related to feed manufacturing. Use the collected information and appropriate scientific literature to write a detailed report on feed manufacturing processes and write a brief report on the importance of feed particle size in poultry nutrition

Reading, evaluation and discussion of scientific papers

To encourage the critical evaluation of scientific publications via group discussions and preparation of written reports

Critically evaluate scientific and technical publications and discuss them knowledgably. Prepare concise and reasoned written critiques

Evaluation

Acquisition and integration of knowledge and information.

Critical thinking

Verbal written communication skills.

5.4 Journal Paper Review and Discussion

The purpose of this component of the course is to learn how to read journal articles critically and effectively while assessing the relevance to the discipline. In addition, it encourages students to become familiar with the recent literature in poultry nutrition and gain expertise and confidence in evaluating their relevance.

Discussion #	Topic	Date	
		Group A	Group B
1	Introductory lecture: reading the literature critically	September 14*	
2	Macro-nutrients: energy and amino acids	Oct 17	Oct 19
3	Macro nutrients: vitamins, trace minerals and feed additives	Nov 21	Nov 23

*The entire class will attend the first review session. Subsequently the class will be split into two equal groups to facilitate individual student input.

- The papers will be distributed at least one week prior to the planned discussion group meeting
- Individual summary due 1 day before the group discussion (no exception)
- The discussion will begin with a brief (5-10 minute) introduction presented by the instructor providing relevant background to the paper
- During the remainder of the discussion students are expected to contribute to the discussion about the content and effectiveness of the paper
- Participation in the discussion will require appropriate understanding of the papers and background reading

5.5 Field Trip

Tuesday, October 31, 2017 - Wallestein Feeds & Supplies Ltd

6 Assessments

6.1 Assessment Details

Critical Evaluation of Journal Papers

Date: Tuesday, October 17, Dropbox

Due date varies by section

Participation in Journal Reviews

Date: Tuesday, October 17, In-Class

Due date varies by section

Review paper on a topic in poultry nutrition or report on commercial feed mill visit

Due: Tuesday, November 21, Dropbox

Choice for feedmill or review paper due September 21 at 5:00 p.m.; the choices to be emailed to Haley Leung (course GTA)

Report Submission due November 21 at 5 PM, Dropbox

Laboratory exercises: Least cost feed formulation

Due: Tuesday, November 21, Dropbox

Final Exam

Date: Wednesday, December 13, TBC

Time: 14:30 to 16:30

6.2 Summary of assessments and tests

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Critical evaluation of journal papers	Varies by section	15	<ul style="list-style-type: none">-Critical evaluation of scientific and technical publications relevant to poultry nutrition-Ability to engage in the scientific process including identifying problem statement, hypothesis, critique of methodology, and data interpretation-Accurate and effective communication of scientific ideas, arguments and analysis in written form
Participation in journal reviews	Varies by section	5	<ul style="list-style-type: none">-Personal and professional integrity, respecting diverse points of view and the intellectual contribution of others in a group discussion
Laboratory exercises	Submission: Nov 21, 5 PM	20	<ul style="list-style-type: none">-Familiarization with least cost formulation of poultry feeds-Appreciation of aspects of feed processing-Problem solving and feed quality control-Organization and clarity of written reports

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Review paper on a topic in poultry nutrition or report on commercial feed mill visit	Choice for feed mill or review paper: Sep 21, 5 pm (email: hleung03@uoguelph.ca) Submission: Nov 21, 5 PM.	10	-Critical analyses and articulation of principles and concepts in poultry nutrition -Understanding and appreciation of the terminology and concepts related to commercial poultry poultry feed manufacture -Organization and clarity in written reports
Final examination	Date: Dec 13 Time: 14:30 - 16:30 Room: TBC	50	-Understanding of key principles and concepts in poultry nutrition -Application of knowledge for addressing poultry and non-ruminant nutrient issues

7 Course Statements

7.1 Grading Policies

Since journal reviews constitute a significant fraction of the course effort and grade, it is essential that they represent your personal efforts.

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 clearly 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 referral of the offending students to the Associate Dean of O.A.C. who will assign the appropriate penalty.

7.2 Group Work

For critical review of journal articles students are encouraged to work in consultancy groups, seek inputs from various sources but assignment need to be handed in and will be marked for individual student.

For the review paper on atopic in poultry nutrition and Feed mill tour report, students are expected to work individually or in a groups of 2. If two students join hands to work together then one report is expected. Students within groups will be given the same marks, unless student one suggests in writing - to an uneven distribution of marks.

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 regulations and procedures for [Academic Consideration](#) are detailed in the Undergraduate Calendar.

8.3 Drop Date

Courses that are one semester long must be dropped by the end of the fortieth class day; two-semester courses must be dropped by the last day of the add period in the second semester. The regulations and procedures for [Dropping Courses](#) are available in the Undergraduate Calendar.

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 book their exams at least 7 days in advance, and not later than the 40th Class Day.

More information: www.uoguelph.ca/sas

8.6 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.

The [Academic Misconduct Policy](#) is detailed in the Undergraduate Calendar.

8.7 Recording of Materials

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate 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 which apply to undergraduate, graduate and diploma programs.
