



# ANSC\*4560 Pet Nutrition

Fall 2017

Sections(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - September 06, 2017

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## 1 Course Details

### 1.1 Calendar Description

This course covers nutrient requirements, feed formulation and nutritional idiosyncrasies for dogs, cats, and exotic pets.

**Pre-Requisite(s):** NUTR\*3210

### 1.2 Timetable

Lectures: Tuesday/Thursday 4:00 – 5:20 p.m. in ALEX 100

### 1.3 Final Exam

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

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## 2 Instructional Support

### 2.1 Instructor(s)

**Anna Kate Shoveller**

Email: ashovell@uoguelph.ca  
Telephone: +1-519-824-4120 x53140  
Office: ANNU 240  
Office Hours: By appointment and TBA

**Jim Atkinson**

Email: jatkinso@uoguelph.ca  
Telephone: +1-519-824-4120 x53716  
Office: ANNU 228  
Office Hours: By appointment and TBA

**Adronie Verbrugghe**

Email: averbrug@uoguelph.ca

Telephone: +1-519-824-4120 x54034  
Office: OVCP 2148  
Office Hours: By appointment and TBA

## 2.2 Teaching Assistants

Teaching Assistant	Email	Responsibilities	Office	Office Hours
James Templeman	jtemplem@uoguelph.ca	Quizzing Commercial	TBA	TBA
Natalie Asaro	nasaro@uoguelph.ca	product comparisons and formulation	TBA	TBA
Tiana Owens	owenst@uoguelph.ca	Wikipedia assignments and operation	TBA	TBA
Iiona Parenteau	iparente@uoguelph.ca	Formulation	TBA	TBA

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## 3 Learning Resources

### 3.1 Required Resources(s)

**L.P. Case, D.P. Carey, D.A. Hirakawa and L. Daristotle (2010) Canine and Feline Nutrition, 3rd Edition, Mosby, Inc., St. Louis, MO. (Textbook)**

5 are on reserve

### 3.2 Recommended Resources(s)

**The Mark Morris Institute (MMI). Small Animal Clinical Nutrition, 5th Edition (Textbook)**

[http://www.markmorrisinstitute.org/sacn5\\_chapters.html](http://www.markmorrisinstitute.org/sacn5_chapters.html)

### 3.3 Additional Resources(s)

#### **Other Resources (Notes)**

Electronic copy of course notes, handout (copies of the PPT slides) and other material will also be posted on a weekly basis on the course website. Copies of course notes are not intended to be the sole source of information, but guide an academic discussion on course material.

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## 4 Learning Outcomes

### 4.1 Course Learning Outcomes

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

1. Develop an understanding of the different needs of different exotic animals.
2. Develop an understanding of the basic digestive, physiological and metabolic processes of

dogs and cats as they relate to nutrition.

3. Be aware about the relationship between nutrition, environment, welfare and health.
4. Compare approaches for establishing nutrient requirements, nutritional specifications, and feed formulation guidelines and be able to discuss some of the limitations and implications of these approaches. Learn about some of the methods and protocols commonly used in pet nutrition research.
5. Learn about feed ingredients, their origin, and the factors affecting their quality and nutritive value.
6. Learn about formulation and manufacturing pet foods (pet feeds) and the regulatory issues related to pet foods.
7. Be exposed to current and emerging issues in the pet food industry.
8. Acquire some of the skills needed to be able to effectively gather, integrate and analyze scientific information to make informed decisions related to the nutrition and health of companion animals and be able to develop a critical view of nutritional claims and statements found in technical and commercial pet food documentation and advertising.
9. Learn about available commercial and unconventional pet foods.
10. Understand that optimal feeding of healthy companion animals is important for the prevention of disease.

## 4.2 University Level Learning Outcomes

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

### 1. **Literacy**

Students will be required to critically review and understand the up-to-date scientific information on pet nutrition compiled in course notes and lecture material (power point slides). The students will also be required to review scientific papers and technical documents, comprehend and present ideas and findings into an imposed format.

### 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.

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## 5 Teaching and Learning Activities

## 5.1 Lecture Schedule

Date	Topics(s)	References	Details
Week 1 - Sept 7	Introduction & Factors influencing nutrient requirements: Metabolic idiosyncrasies of the dog and the cat		Instructor: J.L Atkinson <i>featuring J. Templeman and video summary of course</i>
Week 2 - Sept 12 and 14	Factors influencing nutrient requirements: Metabolic idiosyncrasies of the dog and the cat		Instructor: J.L. Atkinson  <b>Note: Add period ends Sept 15.</b>
Week 3 - Sept 19 and 21	Revisit class outline, release topics for assignments; The pet food industry and pet food market, organizations and regulations		Instructor: A.K. Shoveller
Week 4 - Sept 26	TWO STAGE QUIZ; Pet industry career presentation		Instructor: J. Templeman / A.K. Shoveller
Week 4 - Sept 28	Recommended energy and nutrient intakes for dogs and cats		Instructor: A.K. Shoveller
Week 5 - Oct 3 and 5	Recommended energy and nutrient intakes for dogs and cats		Instructor: A.K. Shoveller
Week 6 - Oct 10	Study Break (No Class)		
Week 6 - Oct 12	Manufacturing pet food: Ingredient quality and processing techniques		Instructor: A.K. Shoveller  <b>Product comparison due by 11:59 p.m. via Dropbox.</b>
Week 7 - Oct 17	Manufacturing pet food: Ingredient quality and processing techniques		Instructor: A.K. Shoveller

Date	Topics(s)	References	Details
Week 7 - Oct 19	TWO STAGE QUIZ; Pet industry career presentation		Instructor: A.K. Shoveller
Week 8 - Oct 24 and 26	Obesity and weight management		Instructor: A. Verbrugghe  <b>Note: Formula spreadsheet to mimic product comparison due Oct. 27 by 11:59 p.m. via Dropbox.</b>
Week 9 - Oct 31	Behavior in cats and dogs and its effect on feeding management		Instructor: A.K. Shoveller
Week 9 - Nov 2	Life-cycle nutrition for dogs and cats		Instructor: A.K. Shoveller  Note: 40 <sup>th</sup> class day - November 3 <sup>rd</sup>
Week 10 - Nov 7	Senior cat considerations	Supplementary reading: Healthy aging in dogs	Instructor: A.K. Shoveller
Week 10 - Nov 9	TWO STAGE QUIZ; Pet industry career presentation: Leah Lambrakis Vice President, R&D Simmons Pet Food, Inc.		Instructors: A.K. Shoveller, J. Templeman
Week 11 - Nov 14 and 16	Gastrointestinal health, the first line of defense		Instructor: A.K. Shoveller
Week 12 - Nov 21	Oral and dental health of cats and dogs		Instructor: A.K. Shoveller
Week 12 - Nov 23	Nutrition of working dogs		Instructor: A.K. Shoveller
Week 13 - Nov	Feeding of alternative pet species - pocket pets, reptiles		Instructor: J. L. Atkinson

Date	Topics(s)	References	Details
28 and 30	and cage birds		Note: <b>GROUP SUBMISSION for Wikipedia page on nutrition knowledge that underlies product comparison and formulation due December 1.</b>

## 6 Assessments

### 6.1 Marking Schemes & Distributions

Name	Scheme A (%)
3* 2 stage quizzing	30.00
Product comparisons for selected type of diet	15.00
Formulation spreadsheet	15.00
Wikipedia page	20.00
Final Exam	20.00
Total	100.00

### 6.2 Assessment Details

#### **3\* 2 stage quizzing**

**Date:** , On-line individual (8%) and Group in-class (2%)

Note:

- Individual quizzes available for 24 hrs prior to class and done through Course Link (4pm-4pm).
- Group quiz in class

#### **Product comparisons for selected type of diet**

**Date:** Friday, October 13

#### **Formulation spreadsheet**

**Date:** Friday, October 27, In-class

Due before 11:59 pm via Dropbox

#### **Wikipedia page**

**Date:** Friday, December 1, In-class

Solid scientific support documentation for your product (GROUP)

#### **Final Exam**

**Date:** , TBA

Based on exam scheduling. TBA.

## 6.3 Term Project Description & Details

Each student will be required to carry out a term project worth 50% of the final mark. The term will focus on the evaluation of current commercial diets (nutrient levels and ingredients utilized), subsequent development of a similar formulation, and then a GROUP assignment to summarize the scientific support for that type of diet.

1. White space analyses (**due October 13 as described above**): The type of product for dogs or cats will be assigned and will be based on diets for healthy animals. Students are to research diets across multiple companies and compare the nutrient targets and ingredients utilized. As students compile these comparisons they are encouraged to seek out scientific support (or lack thereof) for the dietary approach/philosophy.
1. Formulation spreadsheet (**due October 27 as described above**): Students will use software developed by teaching assistant Ilona Parenteau and Professor Shoveller to try and duplicate diets that were reviewed in #1. We encourage you to consider new nutritional technologies from the scientific peer-reviewed literature to incorporate into your product and “tell your story”.
1. Wikipedia page: Individuals with the same diet project will be revealed on October 27<sup>th</sup> and at this point forward groups should work together on a Wikipedia page that provides support for the diet philosophy overviewed in #1 and #2. We advise groups to consider taking the training courses offered on Wikipedia to maximize the final marks (Wikipedia staff will provide a summary of whether Wikipedia directions were followed).

## 6.4 Late Assignment Policy

10% per day will be assigned for late assignments. It is the student’s responsibility to request consideration for late assignments or missed quizzes a minimum of 5 days prior to the deadline.

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# 7 Course Statements

## 7.1 Grading Policies

On-line individual quizzes will be graded immediately and grades available within 72 hrs of close of quizzes. Group quizzes will be graded within 7 working days.

## 7.2 Course Policy on Group Work

Working in groups is challenging, but certainly a “real life” experience. Please show compassion, consideration and respect for each other.

# 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 Assignments

Keep paper and/or other reliable back-up copies of all 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](http://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 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.

## 8.8 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.

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