



ANSC*4100 Applied Environmental Physiology and Animal Housing

Winter 2020

Section(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - January 03, 2020

1 Course Details

1.1 Calendar Description

Basic concepts of environmental physiology and their application to animal housing and management will be introduced. The course will review the physics of heat flow, light and air quality as they relate to animal biology and health. Other aspects, such as the physical environment, that impact on animal health and well-being will be discussed.

Pre-Requisites: ANSC*3080

1.2 Course Description

Basic concepts of environmental physiology and their application to animal housing and management will be introduced. The course will review the physics of heat flow, light and air quality as they relate to animal biology and health. Other aspects, such as the physical environment, that impact on animal health and well-being will be discussed.

1.3 Timetable

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

1.4 Final Exam

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

2 Instructional Support

2.1 Instructional Support Team

Instructor: Vern Osborne
Email: vosborne@uoguelph.ca
Telephone: +1-519-824-4120 x53691
Office: ANNU 234a

2.2 Teaching Assistants

Teaching Assistant: Bethany Harwood
Email: harwo01@uoguelph.ca

Teaching Assistant: Shaelynn Langman
Email: slangman@uoguelph.ca

Teaching Assistant: Angela Wilson
Email: awilso17@uoguelph.ca

3 Learning Resources

3.1 Additional Resources

Course Resources (Other)

Required Texts: N/A

Recommended Texts: N/A

Lab Manual: N/A

Other Resources: N/A

Field Trips: N/A

Additional Costs: N/A

4 Learning Outcomes

4.1 Course Learning Outcomes

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

1. Specific Learning Outcomes:
 1. Develop a basic understanding of animals' physiological responses to the environment and how these responses influence health, productivity and well-being.
 2. Develop science-based recommendations for animal housing and management.
 3. Integrate, interpret and synthesize information from multiple disciplines (environment, genetics, economics, nutrition, housing, society and agrology) to improve animal building envelopes.
 4. Extrapolate, cultivate, construct and apply advanced research and analytical techniques.
 5. Effectively communicate their thoughts, arguments, and decision-making outcomes in a professional manner.
 6. Develop a mature intellectual independence and to integrate ethical reasoning and apply it to improve animal housing designs.
 7. Be able to effectively participate in group settings to collaboratively come to innovative solutions to current issues in animal housing design.

5 Teaching and Learning Activities

5.1 Lecture

Topics:

Week 1

Environment/Animal Integrated Physiology/Performance Relationships

Week 2

Basic Principles of the Thermal Environment, Ventilation principles

Week 3

Meteorology/Biological Rhythms/Photoperiods/Sound

Week 4

Environment and Animal and Stockperson Health

Week 5

Environment and Animal Handling

Week 6

Animal Building Envelopes, Materials, Equipment and New Technologies

Weeks (7-12)

Species review of current and future building envelopes (beef, dairy, swine, poultry, horse, sheep, goats, aquaculture, lab animals)

5.2 Seminar

Topics:

N/A

5.3 Lab

Topics: N/A

6 Assessments

6.1 Marking Schemes & Distributions

The final exam is worth 20% of the final grade.

6.2 Assessment Details

Course Assignments and Tests (0%)

Assignment or Test	Due Date	Contribution to Final Mark (%)	Learning Outcomes Assessed
Mid-term Exam	Feb 13	20	1-6
Design Project	April 2	40	1-7
Personal Research Notebook	April 2	18	1-5
Special Project	April 2	2	2,3,7
Final Exam	April 16	20	1-6

Additional Notes: (0%)

Design Project: Each student(s) should create, retrofit and/or research a design item/concept that could be applied to a number of the topics covered in this class. Template will be provided and will discuss further in first class period.

Personal Research Journal: Over the course of the semester, students maintain a personal research journal based on the topics discussed during class. This is to develop and enhance the student's knowledge on the subject and which research group(s) around the world is leading the industry, academia or government. The journal is to be handed in on last class day. The template (available on Courselink) for the journal will be discussed in the first class period.

Special Project: Discussed in class.

7 Course Statements

7.1 Grading Policies

N/A

7.2 Course Policy on Group Work

N/A

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

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>
