



ANSC*4100 Applied Environmental Physiology and Animal Housing

Winter 2023

Section(s): C01

Department of Animal Biosciences

Credit Weight: 0.50

Version 1.00 - January 06, 2023

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

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1.3 Timetable

Tuesday/Thursday 8:30am - 9:50am

ROZ 103

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

1.4 Final Exam

Final exam is April 21, 2023

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 (GTA):	Ivan Lange de Campos
Email:	camposi@uoguelph.ca

Teaching Assistant (GTA):	Morgan Colling
Email:	mcolling@uoguelph.ca

Teaching Assistant (GTA):	Jesus Mauricio Pisco
Email:	jmaurici@uoguelph.ca

2.3 Communicating with your Instructor

During the course, your instructor will interact with you on various course matters on the course website using the following ways of communication:

- **Announcements:** The instructor will use **Announcements** on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.
- **Ask Your Instructor Discussion:** Use this discussion forum to ask questions of your instructor about content or course-related issues with which you are unfamiliar. If you encounter difficulties, the instructor is here to help you. Please post general course-related questions to the discussion forum so that all students have an opportunity to review the response. To access this discussion forum, select **Discussions** from the **Tools** dropdown menu.
- **Email:** If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private

message by email. The instructor will attempt to respond to your email within 24 hours.

- **Video Call:** If you have a complex question you would like to discuss with your instructor, you may book a video meeting on Teams (or alternate platform being used by your instructor). Video meetings depend on the availability and are booked on a first come first served basis.
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3 Learning Resources

3.1 Additional Resources

Course Resources (Other)

Required Texts: All information on Courselink

Recommended Texts: N/A

Lab Manual: N/A

Other Resources: N/A

Field Trips: N/A

Additional Costs: N/A

3.2 Course Technology and Technical Support

This course will use a variety of technologies including;

- CourseLink (main classroom)
- Teams (via Office 365)

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/system-and-software-requirements>

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

<http://spaces.uoguelph.ca/ed/system-requirements/>
<https://courselink.uoguelph.ca/d2l/systemCheck>

CourseLink

This course is being offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). By 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 and Brightspace Learning Environment web accessibility standards.

<http://www.uoguelph.ca/web/privacy/> <https://www.d2l.com/legal/privacy/>
<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): 1-866-275-1478

Support Hours (Eastern Time):

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

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 are responsible for learning how to use Teams and it's features.

For Teams Support visit the CCS website for more information.

<https://www.uoguelph.ca/ccs/services/office365/teams>

3.2 Library Access

As a student, you have access to the University of Guelph's library collection, including both physical and electronic materials. For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library's website.

If you are studying off campus and would like to access the library's electronic resources, use 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/>

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

4 Learning Outcomes

Specific Learning Outcomes:

4.1 Course Learning Outcomes

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

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.
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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

Name	Scheme A (%)
Midterm Exam	15
Design Project	50
Personal Research Notebook	20
Final Exam	15
Total	100

6.2 Assessment Details

Midterm Exam (15%)

Date: Thu, Feb 16, In Class

Learning Outcome: 1, 2, 3, 4, 5, 6, 7

Design Project (50%)**Date:** Tue, Jan 10 - Thu, Apr 6**Learning Outcome:** 1, 2, 3, 4, 5, 6, 7

Specie selection and geo-location (Due Jan 19/2023)

Prototype (Due Feb 7/2023)

Design Project: (Final submission Due March 30th , 2023 by Dropbox)

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

Personal Research Notebook (20%)**Date:** Tue, Jan 10 - Thu, Apr 6**Learning Outcome:** 1, 2, 3, 4, 5, 6, 7

Part A (Due Feb 14 /2023)- 8%

Part B (Due March 28/2023) -12 %

Personal Research Journal: (Due Feb 14th and March 28th, 2023 by Dropbox)

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.

Final Exam (15%)**Date:** Thu, Apr 21, 8:30 AM - 10:30 AM**Learning Outcome:** 1, 2, 3, 4, 5, 6, 7

7 Course Statements

7.1 Grading Policies

Remote Learning Etiquette

Remote learning course websites may include both synchronous and asynchronous interactions and have the same protections, expectations, guidelines, and regulations used in face-to-face settings. Here you will find a list of guidelines and expectations for the remote learning environment.

To get the most out of your remote delivery class, consider the following:

1. Be respectful of your instructors, TAs and peers in the online synchronous and asynchronous class environment.
2. Avoid the use of offensive language and inappropriate jokes to keep the environment positive for all.
3. Refrain from making inflammatory, disrespectful, or discriminatory comments about your instructors, TA or peers within the remote learning environment, external sites, or social media.
4. Take advantage of the mute button in synchronous classes and only unmute yourself when necessary.
5. During synchronous lectures, keep discussions in the chat related to the course material.
6. Be mindful of both yours and other's personal information; if you are recording materials presented synchronously, ensure all participants are aware.
7. Posts to the discussion board should be on-topic and not promoting profit-driven products and services.
8. If you run into technical difficulties when submitting an assignment, reach out to the TA's for assistance.
9. If you disagree with a grade you received, find time to have a conversation with your instructor or TA about it. Do not incite other students to argue with the instructor over assessments or grades related expectations.
10. Use clear and concise language.
11. Course materials provided within CourseLink should not be posted elsewhere without the permission of the instructor.
12. Do not post or sell course materials and notes to course notes websites.
13. Do not share your username and password with another student.

Behaviours that are not tolerated, but not limited to, include:

- Threatening or harassing a student or instructor online.
- Having someone else complete your assessments,
- Attempting to compromise the security or functionality of the CourseLink learning environment.

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.

7.4 Dropbox Submissions

Assignments should 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 was complete, you can view the 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 back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommend 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.

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 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 contact your instructor or CourseLink Support.

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

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 make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

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>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 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).

8.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.
