

AOM4642
ENVIRONMENTAL SYSTEMS FOR AGRICULTURAL STRUCTURES
FALL 2020

1. **Catalog Description:** *3 credits.* Effects of the environment on plant and animal production, processing operations and quality of stored produce. In addition this course addresses the selection of building materials and sizing of components of environmental systems in agricultural structures to enhance more efficient agricultural production, processing and storage.

This course is a study of agricultural structures and the environment within these structures. The first part of the course focuses on understanding the components of the environment, the impact of these components on building usage, and how to control the environmental variables of the building. The second part of the course will focus on the study of the types of structures used for plant and animal production and for storage of agricultural produce. General building design issues, building codes and types of building construction are also covered.

2. **Instructor:** Dr. Ying Zhang
 - a. Office location: 103 Frazier Rogers Hall
 - b. Telephone: 352-294-6864
 - c. E-mail address: yingzhang409@ufl.edu
 - d. Course site: Canvas e-Learning
 - e. Office hours: MWF 7th and 8th Periods (1:55pm – 3:50pm) or by appointment

To contact the professor, please email her and she will respond. **IMPORTANT:** Please allow up to 48 hours for a response, not including weekends or holidays.

3. **Meeting Times:** T, R 5th Period (11:45am – 12:35pm)
T 8th Period (3:00pm – 6:00pm)
4. **Meeting Locations:** Zoom virtual meetings
5. **Pre-requisites and Co-requisites:** MAC1147 and 3 credits of physics
6. **Course Objectives:**

Students, upon completing this course, will be able to:

 - a. Describe relationships between environment in structures and animal housing and plant and produce storage
 - b. Identify measurement devices used for monitoring environmental conditions
 - c. Identify key components of environmental systems, buildings, and building codes
 - d. Determine and calculate environmental conditions using psychrometrics
 - e. Evaluate construction methods and building material characteristics
7. **Class/Laboratory Schedule:** Listed assigned meeting times.

8. Material and Supply Fees: None

9. Required Textbooks:

There is no required textbook for this course. Handouts and online material will be provided to you that will serve as a text.

10. Recommended Reading: None

11. Computer skills requirements:

Minimum technical skills needed for success in the course include:

1. Using the Canvas learning management system
2. Creating and submitting files in commonly used word processing program formats
3. Using spreadsheet programs
4. Using presentation and graphics programs.

12. Hardware and Software Requirements:

Access to and on-going use of a computer is required for all students. Students should have access to a laptop computer with internet for course meetings. Students will need [Microsoft Office](#) products installed on their computer. In addition, students will need to access [UFApps](#), a cloud-based hosting service available free to all UF students and faculty, in order to use SketchUp, a 3D modeling software.

Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an account, download software or schedule an appointment in advance. Honorlock is available 24/7 and all that is needed is a computer, a working webcam, and a stable Internet connection. To get started, you will need Google Chrome and to download the Honorlock Chrome Extension. You can download the extension at www.honorlock.com/extension/install. When you are ready to test, log into Canvas, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session by webcam as well as recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device. Honorlock support is available 24/7/365. If you encounter any issues, you may contact them via live chat.

13. Course Outline:

- 1 Measuring Environmental Conditions**
- 2 Heat Transfer**
- 3 Reading the Psychrometric Chart**
- 4 Solving Problems Using the Psychrometric Chart**
- 5 Insulation**
- 6 Structures for Plant Production**
- 7 Alternative Agriculture**
- 8 Storing Fresh Produce**

- 9 Environmental Modification
- 10 Livestock Housing
- 11 Standards, Codes & Loads on Structures
- 12 Building Materials: Concrete
- 13 Building Materials: Concrete Masonry
- 14 Building Materials: Steel
- 15 Building Materials: Wood
- 16 Building Materials: Wood Frame Construction
- 17 Types of Structures: Hay, Silage and Grain Storage
- 18 Types of Structures: Fences

14. Attendance, Expectations, and Exam Make-up Policy: Attendance (on time) at lectures is expected from all students at all times and will be recorded at every class meeting. During the course of the semester, students may miss no more than three days without penalty to their attendance grade.

No make-up exams will be given except for valid medical reasons or unless prior arrangements have been made. Additional information and UF policies related to attendance, expectations, make-up exams can be found in the [Undergraduate Catalog](#).

Online Course Recording: Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

15. Grading:

Component	Percent
Homework Assignments	15%
Lab Assignments	15%
Exam 1	20%
Exam 2	20%
Exam 3	20%
Attendance	10%

Students who have questions about their grades should contact their professor by e-mail. Do NOT contact the TA about grades assigned. Grade is typically posted within one week of the deadline in Canvas.

16. Grading Scale:

A	[100.00 – 93.00%]
A-	[92.99 – 90.00%]
B+	[89.99 – 87.00%]
B	[86.99 – 83.00%]
B-	[82.99 – 80.00%]
C+	[79.99 – 77.00%]
C	[76.99 – 73.00%]
C-	[72.99 – 70.00%]
D+	[69.99 – 67.00%]
D	[66.99 – 63.00%]
D-	[62.99 – 60.00%]
E	[59.99 – 0.00%]

For information on current UF policies for assigning grade points, see the Grades and Grading Policies section of the [UF Undergraduate Catalog](#).

17. Assignments: Assignments will be marked down for a sloppy presentation and, if excessive, they may be returned un-graded. All assignments must be typed and are due one week from when assigned. Assignments must be submitted via Canvas by 11:59 PM of due date. Assignments submitted late, but before 5:00 PM on the day following the due date, will be marked down 10 points. Assignments returned late, before 5:00 PM on the second day following the due date will be marked down 50 points. No assignments will be accepted after 5:00 PM on the third day following the due date.

18. Online Course Evaluation Process: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://gatorevals.aa.ufl.edu/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

19. Academic Honesty Policy: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others. All work must be original and completed individually.

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *“We, the members of the*

University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information [View the Student Conduct and Honor Codes](#)

20. Services for Students with Disabilities: The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 352-392-8565, [Disability Resource Center](#)

21. Campus Helping Services: Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university’s counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- [University Counseling & Wellness Center](#), 3190 Radio Road, 352-392-1575,
Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Wellness Coaching
- *U Matter We Care*, www.umatter.ufl.edu/
- [Career Resource Center](#), First Floor JWRU, 392-1601

Student Complaints:

Residential course: [UF Complaints Policy](#)

Online course: Distance Learning [Student Complaint Process](#)

22. Software Use: All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.