

AOM4642
ENVIRONMENTAL SYSTEMS FOR AGRICULTURAL STRUCTURES
FALL 2018

- 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. Jonathan Adam Watson
- a. Office location: 263 Frazier Rogers Hall
 - b. Telephone: 352-392-1864 x 263
 - c. E-mail address: jaw7385@ufl.edu
 - d. Course site: Canvas e-Learning
 - e. Office hours: MWF 7th and 8th Periods (1:55pm – 3:50pm) or by appointment

Teaching Assistant: None

Your professor has an open-door policy, so do not hesitate to knock on his office. If he is not in his office, please email him and he will respond. To speak to your TA, please use the email provided above. **IMPORTANT:** When contacting the professor or the teaching assistant, 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:** 129 Frazier Rogers Hall (T, R 5th Period)
110 Frazier Rogers (T 8th Period)
- 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. Identify measurement devices used for monitoring environmental conditions
 - b. Determine and calculate environmental conditions using psychrometric charts
 - c. Describe relationships between the building environment and animals, plants and produce within buildings

- d. Identify key components of building codes
- e. Evaluate construction methods and building materials characteristics

7. Class/Laboratory Schedule: Listed assigned meeting times. **Material and Supply Fees:** None

8. Textbooks and Software Required:

Handouts and online material will be provided to you that will serve as a text.

9. Recommended Reading:

None

10. 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**

11. 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. Students will use their cell phone, computer, or other electronic device to acknowledge their attendance by submitting so through a provided link that will temporarily activate during class hour. Otherwise, it is the responsibility of the student to make his or her presence known at the end of class to receive attendance credit. 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](#).

12. Grading:

Component	Percent
Homework Assignments	15%
Exam 1	25%
Exam 2	25%
Exam 3	25%
Attendance	10%

Students who have questions about their grades should contact their professor by e-mail. Do NOT contact the TA about grades assigned.

13. 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](#).

14. 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

15. Online Course Evaluation Process: Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at [Gator Rater](#). Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at [Gator Rater](#).

16. 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](#)

17. 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](#)

18. 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: Dean of Students Office [UF Complaints Policy](#)

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

- 19. 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.