Environmental Technologies 1 Summer 2024
ARC 6912
Professor: Dr. Ryan Sharston
Instructor's email: r.sharston@ufl.eu
Class times: Tuesdays 2 PM - 5 PM on Canvas's Zoom Conferences (please check the page for each week's Zoom call).
Office Hours: Thursday 2 PM - 4 PM on Zoom (link below):
https://ufl.zoom.us/j/94732582106?pwd=YlZYdmxtNTNHNmd2d3F1aFNXK292QT09

The quality and performance of systems that modulate the environment are major influences on the perceptions held by owners and occupants regarding building success, so the systems discussed in this course play a very important role in every building type. These systems have a substantial effect on economics, building performance, occupant health, safety, comfort, and productivity. It is, therefore, ethically imperative that every architect gain a basic competency in these systems to achieve their proper implementation and integration into the building design process.

The main **objective** of this course is to provide a basic understanding of these topics. You will:
1. Learn to recognize the interactions between building systems and natural environmental systems.
2. Learn to quantify the effect of architectural design decisions on both the built environment and the natural environment.
3. Gain basic competency in the passive systems and techniques that modify the thermal environment, air quality, human health.
4. Learn to recognize and understand these systems as integral elements in the design of buildings.

Schedule: The course schedule provides a week-by-week outline of course content and reading requirements. However, I reserve the ability to adjust the schedule if necessary.
Required Texts:
The following text is required for this course and should be purchased.
Lechner, Norbert M. & Andrasik, Patricia, *Heating, Cooling, Lighting: Sustainable Design Strategies Towards Net Zero Architecture,* 5th ed., Wiley, 2021
Reserve Texts:
The following texts will be on reserve in the library. Readings may be required from any of these in association with lecture topics.
Kwok, Alison & Grondzik, Walter. *The Green Studio Handbook: Environmental Strategies for Schematic Design*, 3rd ed. Architectural Press, 2018

Hauslauden, Gerhard, Liedl, Petra, de Saldanha, Michael. *Building to Suit the Climate: A Handbook*. Birkhauser, 2012

Additional Reading: Additional reading will be provided in electronic form, usually as PDF files via e-Learning/Canvas.

Other Required Resources:
Climate Consultant Software, available from UCLA for free download at:
http://www.energy-design-tools.aud.ucla.edu/climate-consultant/request-climate-consultant.php

Lecture Notes: You are responsible for taking your own notes in class. You are encouraged to share and discuss the contents of these lectures with your colleagues. Note that while the lectures will usually follow the general outline of the text, there is material covered in the lectures that is not in the text and vice versa. The contents of the lectures and labs are complementary to the reading.

Attendance: The class will meet during the periods noted above. There will be random quizzes that will be used to assess attendance, so excessive tardiness or lack of attendance will affect your grade. An absence will be considered excused only if caused by situations that are beyond your control such as your own documented illness, family emergencies or death, or a UF recognized academic activity. You will be expected to make up any assignments and collect any information transmitted during your absence – this is your responsibility.

Communication: Most of our communication outside the classroom should be through the e-learning system. Office hours are available should you wish to meet with me in person. You may drop in during posted office hours, or email me to make an appointment outside of these hours.

UF Grading Policy: Information on UF's grading policy can be found at the following location: http://www.registrar.ufl.edu/hubstudents.html University of Florida Grading Scale

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
100-93	92 - 90	89 - 87	86 - 83	82 - 80	79 - 77	76 - 73	72 - 70	69 - 67	66 - 63	62 - 60	59-0

Grading will be based upon the following:

In-Class (Attendance) Quizzes: 20%
Assignments: 30%
Midterm Project: 20%
Final Project: 30%

Late work will not be accepted. All lab work should be submitted on Canvas as a digital submission. Extenuating circumstances, such as a documented illness, death or other family emergency, are considered as reasons to resubmit. However, written proof of the extenuating circumstance must be provided prior to taking the exam. There will be no make-up exam without prior written proof. Voluntary or leisure travel is not a valid excuse for missing an exam.

Quizzes will assess knowledge of the topic but are also used to gauge attendance. Quizzes missed due to absence cannot be made up. Your lowest quiz score will be dropped.
Exam Policy: Exams and quizzes individual work and are closed book.

Academic Integrity: Students are expected to conduct themselves in accordance with the University of Florida policy on academic integrity. Please see the Student Conduct Code, the Graduate Student Handbook, or this website for more details. http://www.dso.ufl.edu/studentguide/studentrights.php Cheating, lying, or plagiarism will not be tolerated in this class, and will be submitted to the Director of the School of Architecture and the University for further disciplinary action. In addition, the assignment, quiz, project or exam will earn a zero.

Classroom Etiquette: Talking or disrupting class during a lecture or disrupting lab classes will not be tolerated. Cell phones must be silenced during class. I strongly discourage you from texting, emailing, e-shopping, using social networking sites, or web browsing on any portable electronic device during class. It is disrespectful to me and to your fellow students.

Students with Special Needs: Students with special physical needs and requesting classroom accommodation must first register with the Dean of Students Office. The Dean of the Students' Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. All attempts to provide an equal learning environment for all will be made.