

Course Syllabus

Instructor: Eugene Damaso

Class Number: 3 credits

Class schedule: Fri 2:00 – 5:00 PM

Room: TBD

Instructor email: gdamaso@ufl.edu

Office / Office Hours: Appointments for individual help may be made at mutually convenient time.

Course Description

The course is an introduction to building energy modeling for architecture with an emphasis on the conceptual design phase.

Course Goals & Objectives

The course provides an exposure to design performance modeling as it relates to the design process and will explore the net zero iterative design process. As a part of energy modeling, design performance modeling is concerned with the conceptual and schematic phases of project development. During these phases critical energy performance decisions are rapidly explored affecting both the form and performance of the design. The students will expand on their existing knowledge of passive design strategies and renewable energy to validate their design solutions that acknowledge energy as a design problem.

This course will explore design performance based modeling primarily through a project where the course content will be investigated in a net zero competition project.

The course schedule provides a week by week outline of course content, and reading requirements. The schedule may be adjusted to accommodate variances in the time required to cover each topic.

Competition Website:

www.architectureatzero.com

Recommended Text:

Hootman, Thomas. *Net Zero Energy Design A Guide for Commercial Architecture*

John Wiley & Sons, Inc., 2013

(It is recommended that you purchase this book for future reference but it's not required.)

The following text is required for this course, and should be purchased.

Grondzik/Kwok/Stein/Reynolds. *Mechanical and Electrical Systems for Buildings*. Eleventh Edition. Wiley 2010

Additional Reading:

Additional reading may be provided in electronic form, usually as PDF files.

Other Resources:

Sefaira

Available at <http://sefaira.com/>

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. The content of the lectures is complementary to the reading.

Attendance: The class will meet during the periods noted above. 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, etc. 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 email address provided above.

Grading: Grading will be based upon the following:

Attendance	10%
Homework	15%
Project	35%
Final Exam	15%

There is no extra credit, and assignments turned in late will not be accepted.

Information on UF's grading policy can be found at the following location:

location: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Numeric Grade	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Quality Points	4.0	3.75	3.25	3.0	2.75	2.25	2.0	1.75	1.25	1.0	0.75	0

TENTATIVE COURSE OUTLINE

WEEK	DATE	TOPIC	READING/ Assignment
1	8/26	Introduction to Course, Syllabus Competition Introduction	Course Syllabus <i>Net Zero Energy Design</i> Chapter 1 Begin Competition Research
2	9/2	Lecture: Energy Sefaira Introduction	<i>Net Zero Energy Design</i> Chapter 4 Site Development
3	9/9	Lecture: Net Zero Energy Design Project Development	<i>Net Zero Energy Design</i> Chapter 11 Concept/ Massing Studies
4	9/15	Lecture: Passive Architecture Project Development	<i>Net Zero Energy Design</i> Chapter 5 & 6 Building Planning/ Modules
5	9/22	Lecture: Energy Efficient Systems & Renewable Energy Project Development	<i>Net Zero Energy Design</i> Chapter 7 & 8
6	9/29	Project Development	<i>Net Zero Energy Design</i> Chapter 7 & 8
7	10/7	Project Development	Competition Submission Requirements
8	10/14	Project Development	Competition Submission Requirements
9	10/21	Project Development	Competition Submission Requirements
10	10/28	Competition Due – 10/28	
11	11/4	Lecture: Project Delivery & Integrated Project	<i>Net Zero Energy Design</i> Chapter 2 & 3
12	11/11	Veterans Day – No Class	
13	11/18	Lecture: Economics & Operations	<i>Net Zero Energy Design</i> Chapter 9 & 10
14	11/25	Thanksgiving	
15	12/2	Final Exam Review	
16	12/9	Reading Day – No Class	
17	12/16	Exam	

† The date and time for the Final is fixed and cannot be changed. Alternate test times **will not** be available.