ARC6911 Advanced Materials and Methods

Objectives + Goals

- Provide theoretical and historical context for understanding and making technical decisions about materials and methods of construction through readings, discussion, and lecture-based content.
- To deepen technical knowledge of building materials assemblies and construction methods including appropriateness and limitations for certain applications.
- To examine and practice how design intent is developed and recorded in the development of construction documents.
- To develop research-based processes for developing specific building structures, envelopes, and systems.
- Develop criteria for evaluation for the appropriate utilization of assemblies based on design intent and performance criteria.
- Develop the ability to communicate advanced, precise, or complex design intent in documentation including the incorporation of appropriate types of information at relevant levels of precision at a variety of scales of representation: plan, elevation, section, and detail.

Topical Outline

- To make you knowledgeable of the issues involved in detailing and assembling buildings
- To help you understand methods for ensuring the quality of the materials of that construction and the means of its documentation,
- To be able to use and understand the codes which control a building's occupation, safety, and stability

Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>W1</td>
<td>Introduction</td>
</tr>
<tr>
<td>W2-5</td>
<td>Practicalities of Tectonic Thinking</td>
</tr>
<tr>
<td>W6-9</td>
<td>Theories of Tectonic Thinking + Project 1</td>
</tr>
<tr>
<td>W10</td>
<td>Spring Break (no class)</td>
</tr>
<tr>
<td>W11-15</td>
<td>Practice + Theory: Project 2</td>
</tr>
<tr>
<td>W16</td>
<td>Studio final Review (no class)</td>
</tr>
<tr>
<td>W17</td>
<td>Submit final archive via Canvas</td>
</tr>
</tbody>
</table>

The curriculum relies on and comingles with Design Studio, Environmental Technology, Structures, History and Theory courses.
Attendance
Attendance is mandatory and is recorded. Chronic absences and/or tardiness will have a negative impact on your grade, with a loss of up to 5% over your overall score (see grade breakdown below). If you must miss class, it is up to you to get the assignments and notes from your classmates. In the event of serious illness, family or personal crisis, arrangements can be made for attendance, missed exams or work. On this point, it is important for you to let me know of your circumstances as soon as possible.

Performance + Grading
Course grades will be decided by the Independent Exercises, two Projects, final written assignment and portfolio, and attendance/participation in class. The weighting of these components with regards to the final grade is as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weightage</th>
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<tbody>
<tr>
<td>Reading, Response, and Participation</td>
<td>25.00%</td>
</tr>
<tr>
<td>Project 1 (Precedent Study)</td>
<td>30.00%</td>
</tr>
<tr>
<td>Project 2 (Studio Project Implementation)</td>
<td>40.00%</td>
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<tr>
<td>Attendance</td>
<td>5.00%</td>
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Every effort will be made to give timely and appropriate feedback for your performance. If you have questions about your grade, you may schedule a conference to review your scores, attendance and performance.

Grading Scale:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
<th>D-</th>
<th>E</th>
</tr>
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<tbody>
<tr>
<td>Numeric Grade</td>
<td>93-100</td>
<td>90-92</td>
<td>87-89</td>
<td>83-86</td>
<td>80-82</td>
<td>77-79</td>
<td>73-76</td>
<td>70-72</td>
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<td>63-66</td>
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<td>0.59</td>
</tr>
<tr>
<td>Quality Points</td>
<td>4.0</td>
<td>3.67</td>
<td>3.33</td>
<td>3.0</td>
<td>2.67</td>
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To clarify the system of grading for classes:

A
Outstanding work only
A-
Close to outstanding
B+
Very Good Work
B
Good Work
B-
Good work with some problems
C+
Slightly Above Average Work
C
Average Work
C-
Average Work with some problems
D+
Poor Work with some effort
D
Poor Work
E
Inadequate Work

The current UF grading policies for assigning grade points can be found at [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx). An incomplete grade may be assigned at the discretion of the instructor as an interim grade only in cases of extreme extenuating circumstances. The University of Florida maintains a student honor code regarding cheating and use of copyrighted materials produced by others. Specific policies can be found at: [http://www.dso.ufl.edu/judicial/honorcode.php](http://www.dso.ufl.edu/judicial/honorcode.php).

Course Evaluations
In the last three to four weeks of the semester, you will receive an electronic notification and hyperlink that will allow you to complete online course evaluations. Your thoughtful responses to these questions will help inform both the content and conduct of the course in subsequent semesters. Note that all responses are confidential and are not connected with individual respondents in any way. Summary evaluation information is not available for review by the faculty until AFTER course grades are issued and is not connected to individual respondents in any way.

Policy on Retaining Work
Please note that the University of Florida College of Design, Construction and Planning policies state that students’ work may be retained indefinitely for academic purposes. You should be prepared for the instructor to ask that it be exhibited and/or photographed during or after the term. Having your work retained for photography and/or exhibition is evidence of its quality and value to the school. You will always be able to either retrieve your original work or retrieve it temporarily to make copies/photograph it for your own personal purposes.

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 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.

Counseling + Emergency Contacts
Police / Fire / Medical Emergency – 911
Orlando Police Department Non-Emergency Number: 321.235.5300
Consult CityLab-Orlando Student Resources for Emergency contact information.
UF’s Behavioral Consultation Team meets regularly to assess and develop intervention plans for students, faculty or staff in distress and to assist in interventions as needed.
[http://www.ufsa.ufl.edu/faculty_staff/crisis_information_emergencies/behavioral_consultation_team](http://www.ufsa.ufl.edu/faculty_staff/crisis_information_emergencies/behavioral_consultation_team)

The UF Emergency Management website provides a wide range of information and resources designed to prepare you to take action in case of an emergency. [https://emergency.ufl.edu/](https://emergency.ufl.edu/)


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If you have a concern that might be a violation of University policy, report that information (with any evidence) to the DSO office for potential charging consideration. Reports can be submitted online via the following link: https://forms.dso.ufl.edu/public_report/index.php/pid619837?

In addition to these safety measures, UF provides a number of resources designed to support faculty, staff and students who might be experiencing distress:

**UMatter, We Care** is the university’s umbrella program to support UF’s caring culture. Families, faculty, staff and students may email umatter@ufl.edu seven days a week for assistance. http://www.umatter.ufl.edu/

The UF Counseling and Wellness Center provides ongoing counseling support and crisis and emergency services to UF students, as well as assistance recognizing signs of distress in students. https://counseling.ufl.edu

The Office of Victim Services provides 24/7 support to UF students, faculty, staff and visitors who may have been a victim of a crime. http://www.police.ufl.edu/victim-services/

To learn more about how UF works to ensure our campus remains safe, please see the UF Together for a Safe Campus report. https://police.ufl.edu/media/policeufledu/reports/UPD_Safe_Campus2017_ONLINE_Final_9_29_17.pdf

Note: Florida law generally bans firearms on campus. CityLab facilities are under UF control and are therefore part of campus. Anyone may anonymously report illegal or unethical activities via UF’s Web Reporting System. https://www.reportlineweb.com/Welcome.aspx?Client=UF

**Required and Recommended Textbooks**

From time to time, books, magazines, and articles will be provided by the faculty for in-class use. In addition, you are encouraged to bring relevant reference materials to the studio for your own use and for the use of your colleagues.

Please utilize the UF Library Resources. If you need a book that is located in a Gainesville Campus library please forward the title and call number if to me (from the Catalog website) and I will get it for you as soon as I can.

The UF e-learning portal may be used for sharing of certain common references available in electronic format. It will be accessible at https://lss.at.ufl.edu/. Tutorial resources are available to you at this location also. Be sure to make use of “lynda.com” for help with Adobe products, Revit Architecture, Rhino, V-Ray, etc.

**Required textbooks:**

- Ching, Francis D. K. Building Construction Illustrated. Fourth or fifth edition, 2014. Print. This is the classic visual guide to the basics of building construction.

**Some recommended texts are as follows:**


**Other texts:**

Reference Books (you should have from previous courses)

Additional References will be provided electronically.

Changes and Revisions to Syllabus may occur.
This syllabus is subject to change. Any changes will be relayed during regular class meetings.