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ARC3461-6317	Florida Atlantic University School of Architecture Materials and Methods of Construction <i>COURSE SYLLABUS</i>																
<b>Credits</b>	Three																
<b>Statement</b>	<p>The focus of this course is on the order of construction and the nature of materials as a conceptual frame for the derivation and development of architectural language. This emphasis on the order of construction entails an expansion of the student's understanding of design development processes through directed consideration of the materials and their assemblage as constituent elements of building. The orchestration of these elements is addressed both in terms of their systematic and theoretical connections to design. We will attend to the properties, function and behavior of materials used in building assemblies and discuss the methodology, format, and roles of participants in the process of detail design.</p>																
<b>Instructor</b>	Anthony Abbate, A.I.A., N.C.A.R.B.																
<b>Consultations</b>	Reubin O'D Askew Tower, Room 412 220 SE 2 AV Tuesdays and Thursdays Between 1p and 3p. Please make an appointment in advance.																
<b>Communications</b>	Telephone 762.5636 Fax 762.5673 E-mail aabbate@fau.edu Please leave detailed messages and phone number.																
<b>Attendance</b>	<p>Students having more than three unexcused absences from class will receive a fail grade for the course. Students absent from a required presentation or examination will receive, without exception, a fail grade for that presentation or examination. Students are expected to arrive to class on time, prepared, and having completed the reading and homework assignments. Students appearing more than 20 minutes late for class will be logged absent in the roll without exception. Absence does not absolve the student from homework, assignments, or work progress due on the day of absence and the work due the following class.</p> <p>It is the student's sole responsibility to contact someone from the class to get information on the material covered and the assignments.</p>																
<b>Grading</b>	<p>Grade determination shall be based on the following:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>Class participation</td> <td>10%</td> </tr> <tr> <td>Projects</td> <td>40%</td> </tr> <tr> <td>Homework and Tests</td> <td>50%</td> </tr> </table> <p>Letter grades are defined as follows:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>A ...A-</td> <td>Exceptional work and effort exceeding the requirements.</td> </tr> <tr> <td>B+...B-</td> <td>Good work and effort meeting all of the requirements.</td> </tr> <tr> <td>C+...C-</td> <td>Average work and effort meeting the minimum requirements.</td> </tr> <tr> <td>D+...D-</td> <td>Marginal work, meeting the minimum requirements.</td> </tr> <tr> <td>F</td> <td>Failing work, meeting less than the minimum requirements.</td> </tr> </table> <p>Note the School of Architecture requires a minimum passing grade of 'C' or better for this course.</p>	Class participation	10%	Projects	40%	Homework and Tests	50%	A ...A-	Exceptional work and effort exceeding the requirements.	B+...B-	Good work and effort meeting all of the requirements.	C+...C-	Average work and effort meeting the minimum requirements.	D+...D-	Marginal work, meeting the minimum requirements.	F	Failing work, meeting less than the minimum requirements.
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<b>SPC</b>	<p>Upon completion of this course, a university minimum-passing grade (D) indicates the student:</p> <ul style="list-style-type: none"> <li>- Understands the concepts of design of building envelope systems including the selection, evaluation, and detailing of foundations, exterior finishes, glass and glazing, cladding and roofing, and interior finishes.</li> <li>- Understands the applicability of life-safety codes and concepts of detailing and connections.</li> <li>- Understands the principles of ecology and resource conservation affecting the selection and performance of materials.</li> <li>- Is able to demonstrate the following current NAAB SPCs: [19] Life-Safety Systems, [20] Building Envelope Systems, [22] Building Systems Integration, [25] Building Materials and Assemblies.</li> </ul>
<b>Required Texts</b>	<p>Olin, Harold B., et.al. <i>Construction Principles, Materials, and Methods</i>. 6th Edition. New York, New York: Van Nostrand Reinhold, 1995.</p>
<b>References</b>	<p>Allen, Edward. <i>Fundamentals of Building Construction</i>. 2nd Edition. New York, New York: John Wiley and Sons Inc., 1990.</p> <p>Crowe, Norman T. <i>Nature and the Idea of a Man-Made World</i>. Cambridge, Massachusetts: MIT Press, 1995.</p> <p>Ford, Edward R. <i>The Details of Modern Architecture</i>. Cambridge, Massachusetts: MIT Press, 1991.</p> <p>Ford, Edward R. <i>The Details of Modern Architecture Vol. 2: 1928-1988</i>. Cambridge, Massachusetts: MIT Press, 1996.</p> <p>Frampton, Kenneth <i>Studies in Tectonic Culture</i>. Cambridge, Massachusetts: MIT Press, 1995</p> <p><i>Architecture in Detail Series</i>. London, U.K.: Phaidon Press Limited.</p> <p><i>Underwriters Laboratories Directories</i>. Northbrook, Illinois: Underwriters Laboratories Inc.</p> <p><i>Gypsum Construction Handbook</i>. Chicago, Illinois: United States Gypsum Company.</p>
<b>General</b>	<p>Information concerning academic regulations, student rights and responsibilities may be found in the current Florida Atlantic University Catalog and Student Handbook.</p> <p>Personal communication devices such as pagers, beepers, and cellular telephones are to be disabled in class sessions.</p>
<b>Course work</b>	<ol style="list-style-type: none"> <li>1. The student shall keep a notebook for class notes and sketches.</li> <li>2. The student is responsible for acquiring and reading the course textbook.</li> <li>3. The student will be required to conduct self-directed research, investigations, and analysis.</li> <li>4. The student is responsible for acquiring the necessary materials and tools to complete all projects and assignments.</li> </ol>
<b>Field Trips</b>	<p>Field trips to local material manufacturing and assembly plants may be scheduled during the course. Attendance is required.</p>

**Course schedule** The following is an outline of the course and assignments:

- 1 Th 24 AUG **Lecture 1** : Making Buildings: constraints and resources  
**Project 1** The Tectonic Vessel. Due on 31 AUG.  
**Read** Olin: Ch 1 pp 1-71  
**Homework Assignment 1** Due on 29 AUG.
- 2 Tu 29 AUG **Lecture 2** : Codes and Protocols
- 3 Th 31 AUG **Project 1 Due**: Student Presentations
- 4 Tu 05 SEP **Lecture 3** : Sitework  
**Project 2** Detail Drawing. Due on 05 DEC.  
**Read** Olin: Ch 2 pp 73-99  
**Homework Assignment 2** Due on 12 SEP
- 5 Th 07 SEP **Lecture 4** : Foundation Systems
- 6 Tu 12 SEP **Lecture 5** : Concrete  
**Read** Olin: Ch 3 pp 101-162  
**Homework Assignment 3** Due on 19 SEP
- 7 Th 14 SEP **Lecture 6** :Cast and Precast Systems  
**Read** Olin: Ch 3 pp 162-183
- 8 Tu 19 SEP **Lecture 7** : Masonry  
**Read** Olin: Ch 4 pp 185-213  
**Homework Assignment 4** Due on 26 SEP
- 9 Th 21 SEP **Lecture 8** : Unit Masonry and Stone  
**Read** Olin: Ch 4 pp 214-267
- 10 Tu 26 SEP **Lecture 9** : The Metal Frame  
**Read** Olin: Ch 5 pp 273- 316 593-671  
**Homework Assignments 5,5a** Due on 03 OCT
- 11 Th 28 SEP **Lecture 10**: Metals  
**Read** Olin: Ch 5 pp 316-341 673-859
- 12 Tu 03 OCT **Lecture 11** : The Wood Frame  
**Read** Olin: Ch 6 pp 343-389  
**Homework Assignment 6** Due on 10 OCT
- 13 Th 05 OCT **Lecture 12** : Wood and Plastics  
**Read** Olin: Ch 6 pp 389-455
- 14 Tu 10 OCT **Lecture 13** : Moisture Control  
**Read** Olin: Ch 7 pp 458-495  
**Homework Assignment 7** Due on 17 OCT
- 15 Th 12 OCT **Lecture 14** : Thermal Concepts
- 16 Tu 17 OCT **Lecture 15** : High Slope Roofing and Wall Finishes  
**Read** Olin: Ch 7 pp 496-554  
**Homework Assignment 8** Due on 24 OCT  
**Project 2 Review**: Pin-up drawing format and review

- 17 Th 19 OCT **Lecture 16:** Low Slope Roofing, Siding, and Flashing  
**Read** Olin: Ch 7 pp 555-591
- 18 Tu 24 OCT **Lecture 17:** Fenestration Systems: Doors  
**Read** Olin: Ch 8 pp 594-626  
**Homework Assignments 9, 9a** Due on 31 OCT
- 19 Th 26 OCT **Lecture 18:** Fenestration Systems: Windows  
**Read** Olin: Ch 8 pp 626-644
- 20 Tu 31 OCT **Lecture 19:** Glass and Glazing  
**Read** Olin: Ch 8 pp 644-671  
**Homework Assignment 10** Due on 07 NOV
- 21 Th 02 NOV **Lecture 20:** Glass and Glazing
- 22 Tu 07 NOV **Lecture 21:** Finishing Systems  
**Read** Olin: Ch 9 pp 674-689  
**Homework Assignment 11** Due on 14 NOV
- 23 Th 09 NOV **Lecture 22:** Plaster Systems
- 24 Tu 14 NOV **Lecture 23:** Gypsum Plaster and Stucco  
**Read** Olin: Ch 9 pp 689-701  
**Homework Assignment 12** Due on 05 DEC
- 25 Th 16 NOV **Lecture 24:** Gypsum Wallboard  
**Read** Olin: Ch 9 pp 701-734
- 26 Tu 21 NOV **Lecture 25:** Wall and Floor Finishes  
**Read** Olin: Ch 9 pp 735-773; Ch9 pp 788-837
- 27 Tu 28 NOV **Lecture 26:** Paint  
**Read** Olin: Ch 9 pp 837-859
- 28 Th 30 NOV **Lecture 27:** Acoustic Design and Construction  
**Read** Olin: Ch 9 pp 773-788; Ch 862-897
- 29 Tu 05 DEC **Project 2 Due:** Student presentations.
- Th 07 DEC Reading Day. No class.
- Th 14 DEC **Comprehensive Examination** Open books: Olin and Crowe