ARCH 557: SUSTAINABLE CONSERVATION OF THE HISTORIC BUILT ENVIRONMENT

Units: 2
Semester: Fall 2018
Day & Time: Fridays 8:00 – 10:00 AM
Location: Harris 102
Instructor: John D. Lesak, AIA, LEED AP, FAPT
Contact Info: 323.945.5204 mobile / 213.221.1203 office
jdlesak@gmail.com
lesak@page-turnbull.com

Course Description

“Sustainable Development meets the needs of the present without compromising the ability of future generations to meet their own needs…”

This course explores the intersection between the Heritage Conservation and Green Building movements, both of which contribute to sustainable development. Heritage Conservation contributes the ethos of stewardship; defining significance within the built environment; methods for extending the service-life of buildings; the value of maintenance and repair; and effective means for adaptively re-using buildings. Green Building promotes holistic design; response to the urgency of climate change; and encourages us to look at new systems and technology. By exploring a variety of approaches to conserving built environments, students will be able to identify and differentiate between applicable methods for assessing sustainability; develop appropriate metrics; apply evaluation tools; and decide upon appropriate treatments to improve historic and existing building performance and enhance historic rehabilitation and adaptive reuse projects.

Course Notes

Copies of lecture slides and weekly reading (other than the primary text) will be posted on Blackboard. Lecture slides will be posted following class.

Office hours are by appointment.

Required Readings

Primary Text:

Suggested Text:


Reading

Required weekly reading assignments are listed in the lecture schedule in this Syllabus. These readings should be completed before the lecture under which they are listed. Items indicated as “Review” should be quickly scanned to become generally familiar with terms and concepts.

Grading Breakdown

<table>
<thead>
<tr>
<th>% of Grade</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Embodied Energy Calculations</td>
</tr>
<tr>
<td>10%</td>
<td>EcoCalculator Exercise</td>
</tr>
<tr>
<td>10%</td>
<td>Energy Modeling Exercise</td>
</tr>
<tr>
<td>5%</td>
<td>Los Angeles County Solar Report Exercise</td>
</tr>
<tr>
<td>10%</td>
<td>GreenPoint for Existing Homes Checklist Exercise</td>
</tr>
<tr>
<td>25%</td>
<td>Impact Area Class Presentation &amp; Report</td>
</tr>
<tr>
<td>20%</td>
<td>Quizzes</td>
</tr>
<tr>
<td>10%</td>
<td>Class Participation</td>
</tr>
<tr>
<td><strong>100%</strong></td>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

Grading Scale (Example)

Course final grades will be determined using the following scale:

- **A** 95-100
- **A-** 90-94
- **B+** 87-89
- **B** 83-86
- **B-** 80-82
- **C+** 77-79
- **C** 73-76
- **C-** 70-72
- **D+** 67-69
- **D** 63-66
- **D-** 60-62
- **F** 59 and below

Attendance

Medical or family emergencies and religious holidays are the only acceptable excuses for make-up quizzes, acceptance of late assignments and the granting of incomplete grades. More than one unexcused absences will result in a failing grade for the class.
<table>
<thead>
<tr>
<th>Course Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 1</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Week 2</strong></td>
</tr>
<tr>
<td><strong>Week 3</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Week 4</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Week 5</td>
</tr>
<tr>
<td>--------</td>
</tr>
</tbody>
</table>
| September 21 | **Read:**  
**QUIZ 1**  
**ASSIGNMENT 2: Avoided Impacts Analysis** |
| Week 6 | Inherent Sustainability |
| September 28 | **Read:**  
**Review:**  
| Week 7 | Built to Last? Service Life, Durability, and Life Cycle Analysis |
| October 5 | **Read:**  
**Review:**  
**ASSIGNMENT 2 DUE**  
**ASSIGNMENT 3: EcoCalculator** |
## Week 8
**October 12**

**Locations & Linkages**

**Read:**


**Review:**


US Green Building Council, LEED Credits for Location & Transportation (LT)

**Student Impact Area Presentations**

**QUIZ TWO**

## Week 9
**October 19**

**Sustainable Sites + Water Efficiency**

**Read:**

Carroon, Chapter 4: Water and Site, pages 127-166.

**Review:**

US Green Building Council, LEED Credits for Sustainable Sites (SS)

US Green Building Council LEED Credits for Water Efficiency (WE)

**Student Impact Area Presentations**

**ASSIGNMENT 3 DUE**

## Week 10
**October 26**

**Energy | Part 1 – Efficiency and Conservation**

**Read:**

Carroon, Chapter 5: Energy – Not the Only Issue but…, pages 167-216.


**Student Impact Area Presentations**

**ASSIGNMENT 4: Energy Modeling Exercise**
### Week 11  
**November 2**  
**Read:**  
**Review:**  
US Green Building Council, LEED Credits for Energy & Atmosphere (EA)  
**View:**  
**Student Impact Area Presentations**  
**ASSIGNMENT 5: Solarmap**

### November 3  
**FIELD TRIP – ANTELOPE VALLEY INDIAN MUSEUM STATE HISTORIC PARK**  
15701 East Avenue M (between East 150th & 170th streets)  
Lancaster, California, 93535  
10:00 am to 5:00 pm

### Week 12  
**November 9**  
**Materials & Resources**  
**Read:**  
Carroon, Chapter 7: Materials and Resources – Reduce, Repair, Reuse, Recycle, pages 251-288.  
**Review:**  
US Green Building Council, LEED Credits for Materials and Resources (MR)  
[https://www.usgbc.org/credits/new-construction/v4/material-%26-resources](https://www.usgbc.org/credits/new-construction/v4/material-%26-resources)  
**Student Impact Area Presentations**  
**ASSIGNMENT 4 DUE**

### Week 13  
**November 16**  
**Environmental Quality | Part 1: Let’s Not Poison Ourselves / Part 2: The Indoor–Outdoor Relationship**  
**Read:**  
**Review:**  
US Green Building Council, LEED Credits for Indoor Environmental Quality  
**Student Impact Area Presentations**  
**ASSIGNMENT 5 DUE**  
**ASSIGNMENT 6: Preliminary GreenPoint Checklist**

### Week 14  
**November 23**  
**NO CLASS – THANKSGIVING RECESS**
**Week 15**

**November 30**

**Resilience! Mitigation vs. Adaptation**

**Read:**

**ASSIGNMENT 6 DUE**

---

**Statement on Academic Conduct and Support Systems**

**Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [https://policy.usc.edu/scampus-part-b/](https://policy.usc.edu/scampus-part-b/). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, [http://policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

**Support Systems:**

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [https://engemannshc.usc.edu/counseling](https://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [https://engemannshc.usc.edu/rsvp/](https://engemannshc.usc.edu/rsvp/)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [http://sarc.usc.edu/](http://sarc.usc.edu/)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [https://equity.usc.edu/](https://equity.usc.edu/)

---

Syllabus

Arch 557: Sustainable Conservation of the Historic Built Environment
Bias Assessment Response and Support
Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. https://studentaffairs.usc.edu/bias-assessment-response-support/

The Office of Disability Services and Programs
Provides certification for students with disabilities and helps arrange relevant accommodations. http://dsp.usc.edu

Student Support and Advocacy – (213) 821-4710
Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. https://studentaffairs.usc.edu/ssa/

Diversity at USC
Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. http://diversity.usc.edu

USC Emergency Information
Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. http://emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.
Provides overall safety to USC community. http://dps.usc.edu