University of Texas School of Architecture
Living Wall (In)Formatics
Fall 2018

ARC 327R, ARC 386M, LAR 388, and CRP 383

Instructor: Associate Professor Danelle Briscoe


UTSOA Living Wall, 2015

Overview

This seminar will research, design and discuss living wall systems, specifically focusing on those of hot and dry climates. A living wall —or system of plants rooted in growing media attached to a wall itself— holds potential environmental benefits for buildings and dense urban conditions. As such, the course will investigate historical, contemporary and emerging methods and examples of this alternative facade formation.

In addition, such biological systems offer data to discern and visualize multi-scalar aspects of nature in the urban condition. Most conventional design projects and planning endeavors in the built environment rarely monitor and report upon site performance and benefits. In fact, the Sustainable Sites Initiative (SITES), a comprehensive rating system for developing sustainable landscapes, acknowledges this discrepancy and encourages projects to plan for monitoring and reporting activities. Building on its interdisciplinary roots, the course will also discuss the performance metrics of a living wall that address topics in urban ecology, architecture, landscape architecture, and operations and maintenance. To these ends, performance data from living walls include physical information, such as surface temperatures, sound decibels, soil media characteristics, irrigation use, and maintenance activities. The course will aim to examine these factors with regard to a research and design process.

Projects

The course is divided into three projects each with a specific emphasis on a corresponding living wall investigation: research, design and thesis.

Project 1 Each student will research and present a contemporary living wall system. Templates and specific data inquiries will be provided.

Project 2 Each student will progress through a series of focused strategies in order to develop a desired component and living wall system design. Students will engage hands on development and methodology with the Lady Bird Johnson Wildflower Research Center

Project 3 Each student will culminate their research and design processes. The optimal material logic and behavior from Project 2 will be further developed in written and modeled format.

Class format

The class will typically act as a lecture and discussion group, with occasional field trip, critique, workshop or guest lecturer. On occasion, the course will function like a hands-on, self-directed project based seminar. The class will address fundamental theoretical issues of material reality via representation. Students are expected to come prepared to discuss readings and verbally and visually present research. Presentation of work is to be expected on due date. In the second half of the semester, student will write a short paper based on their research, living wall design and topical thesis.

Requirements

Class times	2- 5pm Th, Sutton 3.114
Office hours:	GOL 4.134, 9am – 11am, Monday (or by appointment)
Contact	briscoed@utexas.edu/ 512.810.3133

Evaluation

10% Participation

90%

Project	Topic	Output
(20%) 1:	Research	diagrams/presentation
(40%) 2:	Design	living wall design & diagram
(30%) 3:	Thesis	research abstract/diagrams

Schedule *

08.30. 18	**W 01**	Introduction | course overview | questionnaire Lecture: HISTORY **begin Project 1**
09.06. 18	**W 02**	Reading and discussion Lecture: CLIMATE
09.13. 18	**W 03**	Reading and discussion **Central Standard (2823 South Congress)* Lecture: TYPOLOGY
09. 20. 18	**W 04**	Site visit to LBJ Wild Flower Center Tour Guide Dr. Hans Landel, LBJWFC Conservation Ecologist
09. 27. 18	**W 05**	Project 1 presentations (Group 1)
10. 04. 18	**W 06**	Project 1 presentations (Group 2) | **Begin Project 2**
10. 11. 18	**W 07**	Reading and discussion: DESIGN Visit UTSOA Living Wall/ Talk with Marcus Hogue
10. 18. 18	**W 08**	Danelle at ACADIA conference Independent Site visit/documentation Mopac
10. 25. 18	**W 09**	Work session /Fabrication production
11. 01. 18	**W 10**	**Project 2 Review/Presentations**
11. 08. 18	**W 11**	**Begin Project 3** Lecture: TBD
11. 15. 18	**W 12**	Individual Work session/ critiques
11. 22. 18	**W 13**	HOLIDAY
11. 29. 18	**W 14**	**Project 3 final presentations**
12. 06. 18	**W 15**	Final submission of semester course work

*subject to change as necessary with guest lecturers, field trip, etc.

References

(A web site on **Canvas** provides all required assignments, reference materials and copies of the lectures.)

Week 1 Readings

Waldheim, Charles. "Three: Planning, Ecology, and the Emergence of Landscape" Landscape as Urbanism. Princeton: Princeton University Press, 2016, pp50-67.

McHarg, Ian. "Nature in the Metropolis" Design with Nature. Garden City: Natural History Press, 1969, pp 55-65.

Week 2 Readings

Orff, Kate. "Scale" Toward an Urban Ecology. New York: The Monacelli Press, 2016 pp 197-214.

Udeshika Weerakkody et al. "Particulate matter pollution capture by leaves of seventeen living wall species with special reference to rail-traffic at a metropolitan station". Urban Forestry & Urban Greening. Journal 27 (2017) Elsevier, pp 173-186.

Week6 Readings

Cook, Robert E. "Do Landscapes Learn? Ecology's "New Paradigm" and Design in Landscape Architecture" in Projective Ecology, edited by Chris reed and Nina Marie Lister. New York, Actar Publishers, 2014, pp 218-237.

Week 7 Readings

Briscoe, Danelle. 2014. "Parametric Planting: Green Wall System Research + Design using. BIM," In Design Agency, Proceedings of the 34th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA), edited by David Gerber, Alvin Huang and Jose Sanchez. Cambridge: 333–338.

Veljko Prodanovica et al. "Optimisation of lightweight green wall media for greywater treatment and reuse". Building and Environment. Journal 131 (2018) Elsevier, pp 99-107.

Hardware/Software

It is required that you have a graphically capable laptop able to run modelling and visual programming software. Each assignment will have further defined expectations/requirements specified. Readings will be downloadable from the class Blackboard site. The programs will also be available on the computers in SUT Computer Lab.

Attendance

Attendance is mandatory. Participation is expected. Students with three (3) unexcused absences will be encouraged to drop from the course. The minimum penalty for more than three unexcused absences is a full letter drop in your final grade for the course. Please contact the instructor prior to class if you expect to be late or miss class.

A student who is absent from a class for the observance of a religious holy day may complete the work missed within a reasonable time after the absence, if proper notice has been given in advance of the days to be missed. By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence. A student who fails to complete missed work within the time allowed will be subject to the normal academic penalties.

**All students, faculty and staff who wish to use the SOA woodshop are required to take EHS's new on-line training (https://utdirect.utexas.edu/ehs/class.WBX?s_course_comp=0&s_course_prefix=OH&s_course_number=0500) and pass a short exam at the end. As this training is supplemental to SOA's woodshop training, no one is excluded or grandfathered from the

requirement; both are required in order to use the woodshop's tools and equipment. As part of our efforts to comply with this mandate, the woodshop will soon have a card reader installed at the entrance, similar to those on Goldsmith's and Sutton's exterior doors. We will thereafter keep the door to the woodshop locked (from the outside) at all times. Those who have taken the on-line EHS training will be able to use gain access to the woodshop during operating hours by simply swiping their UT ID cards at the door; those who have not taken the on-line training will not be allowed to enter the woodshop. NO EXCEPTIONS CAN BE MADE.

Basis of Assessment

Establishing grades for projects of a creative nature is a more complex matter than grading in other academic areas. While each project contains certain quantifiable elements by which it may be evaluated, a significant portion of each grade is derived from a broader, more subjective set of issues.
Grading for studio courses is broken into three components: 1/3 grasp (ideas combined with an appropriate process of inquiry), 1/3 process (the consistent and rigorous development of ideas) and 1/3 resolution (the understanding of the project and its architectural implications).

A/ A- : excellent
Project surpasses expectations in terms of inventiveness, appropriateness, verbal and visual ability, conceptual rigor, craft, and personal development. Student pursues concepts and techniques above and beyond what is discussed in class. Project is complete on all levels.

B+/ B/ B- : above average
Project is thorough, well researched, diligently pursued, and successfully completed. Student pursues ideas and suggestions presented in class and puts in effort to resolve required projects. Project is complete on all levels and demonstrates potential for excellence.

C+/ C/ C- : average
Project meets the minimum requirements. Suggestions made in class are not pursued with dedication or rigor. Project is incomplete in one or more areas. (Please note: a C or better is required for the course to count towards the graduate student's program of study.)

D+/ D/ D- : poor
Project is incomplete. Basic skills including graphic skills, model-making skills, verbal clarity or logic of presentation are not level-appropriate. Student does not demonstrate the required design skill and knowledge base.

F : failure
Project is unresolved. Minimum objectives are not met. Performance is not acceptable. Note that this grade will be assigned when you have excessive unexcused absences.

X : (excused incomplete)
Can be given only for legitimate reasons of illness or family emergency. Simply not completing work on time is not an adequate cause for assigning this evaluation.

ALL GRADES ARE SUBJECT TO DEDUCTIONS for absences, late work and late arrivals.

Disabilities

Please notify your instructor of any adaptation you may require to accommodate a specific physical need. You will be requested to provide documentation to the Dean of Students' Office, in order that the most appropriate accommodations can be determined. Specialized services are available on campus through the Services for Students with Disabilities, also found via the web at http://deanofstudents.utexas.edu/ssd/.

Honor Code

The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.