

LA 405: Design and Implementation Focus Studio

Teaching Proposal

Instructor: Ellen Burke

Course Introduction

President Armstrong has commissioned the students of LA 405 to re-design the gardens of his on-campus residence, with the primary goal of reducing lawn areas to demonstrate a more sustainable landscape model. As a symbolic landscape within the campus, and the site of many official functions throughout the year, this site is envisioned to become a model of a new landscape paradigm on campus, one that is both more sustainable, and better related to the environmental context of the campus.

Using the lens of Landscape Performance, the studio will make proposals for landscape strategies at the campus-wide scale, and site-specific design proposals for the President's garden. We will work in interdisciplinary teams with students from Civil Engineering majors.

Through lectures, field trips, workshops and design projects, students will engage with concepts and practices of implementation and of landscape performance. The course will include analysis and interpretation; project design and phasing; representation and design of landscapes as dynamic and evolving systems with social, environmental and generative capacity; and engagement of a life-cycle understanding of landscape materiality. Students will be introduced to the implementation process of a landscape project through both industry standards and more speculative approaches.

Learning Outcomes

As a result of this course, students will be able to:

- Produce and communicate an original design from concept to implementation level.
- Demonstrate an understanding of procedures, relationships and tools for collaboration with other disciplines, users and clients in project construction.
- Demonstrate an understanding of landscape performance and evidence-based design, and evaluate design proposals through the use of landscape metrics.
- Communicate the ways in which the proposals achieve environmental, social and/or economic benefits.
- Demonstrate an understanding of the importance of integrating the principles of aesthetics and site engineering.
- Demonstrate the application of principles of construction to working drawings.
- Demonstrate an awareness of the ethical dimension in material choices, restoration, rehabilitation and remediation in current and future practices.

Studio Structure

Studio Introduction

The studio objectives will be introduced through a lecture on Landscape Performance, using project examples from LAF's database and from other sources.

Field Trips

Throughout the quarter, we will have field trips to local stormwater management and native plant projects, both on campus and in the larger surrounds. We will also have a potential field trip to the office of Bernard Trainor in Monterey, CA.

Module 1: Precedent (1 week)

Students will be assigned a precedent study from a list of built works and landscape technologies. Students will individually research and present their case study to the class, as part of building a collective knowledge base. Following the presentations, students will be quizzed on the main points of the presentations to test comprehension of the material.

Proposed Built Works: Medlock Ames Tasting Room, Arizona State University Campus, Snake River Retreat, Underwood Family Laboratory, Chicago Museum of Science Smart Home, 168 Elm Avenue Residence, Kresge Foundation Headquarters, Baldwin Hills Scenic Overlook

Proposed Technologies: Swale, Hedgerow, Stormwater Harvesting, Greywater Systems, Tree Cover, Rain Garden, Gabion, Permeable Paving

Deliverable: Poster design, quiz

Module 2: Campus Plan (2 weeks)

Working in groups, students will study the landscape of the overall main campus, and make a strategic plan proposal for achieving lawn reductions of 10%, 30% and 50%. Using performance metrics, students will assess environmental, social and economic impacts of their proposals. A workshop on Performance Metrics will be embedded in Module 2.

Deliverable: Campus Master Plan for Lawn Reduction, Performance Metrics

Module 3: Site Analysis (1 week)

Working in groups, students will perform a site analysis at regional, campus/city and site scales. Site analysis will include environmental, social, cultural/historical, and architectural and climactic factors.

Deliverable: Poster Design for Site Analysis, short essay on site opportunities and constraints

Module 4: Site Design (6 weeks)

Working in groups, students will make design proposals for the University President's garden that address the client's programmatic concerns of lawn reduction, water conservation, and creation of a visually pleasing context for official social functions. In addition, students will be asked to propose a programmatic enhancement of habitat, educational, or stormwater management value.

Project Milestones include Concept Design presentation at mid-term (week 6), Design Development drawings and presentation, and Construction Drawings. At the end of the quarter students will make a formal presentation to the President of their design, it's derivation from site analysis and project goals, and metrics addressing performance of the landscape. Two workshops on Performance Metrics, including lectures, will be embedded in Module 4. Following the workshops, a quiz on Performance Metrics will be assigned.

Deliverables: Full design proposal including relevant site analysis; illustrative concept plans, sections and perspectives; developed planting and grading plans that address existing irrigation on site; developed enlargement plan design with sections; site diagrams; cost estimates for construction; phasing strategy; and performance metrics for stormwater management and at least two additional indicators. The proposal is to be formatted on boards for presentation to President, and in booklet form.

Assessment/Evaluation

Students will be assessed based on successful completion of four projects and presentations; one short written essay and two quizzes; a class portfolio; and participation.

Evaluation criteria for the projects will be presented when each project is introduced. In general, evaluation in this course is subjective, and relies on the expertise and experience of the instructor and other faculty. You are being asked to develop and articulate your own set of intentional, thoughtful criteria for design decision-making and for presentations, rather than simply following a checklist. Emphasis will be on improvement throughout the quarter, quality of explorations and of finished product, engagement with conceptual and performance aspects of design, and a demonstrated understanding of basic design principles and methods. Evaluation will be made primarily by the instructor, and will reflect the feedback of other faculty from pin-ups and reviews.

Course Work/Design Projects

1. Precedent Study and Quiz - 15%
2. Campus Plan - 15%
3. Site Analysis (includes essay) – 15%
4. Final Project (includes quizzes) – 50%
5. Booklet – 5%

Materials

Readings - Books

Charles Waldheim, *Landscape Infrastructure: Case Studies by SWA*, Birkhauser, 2011

Anne Whiston Spirn, *The Language of Landscape*, Yale University Press, 1998

Susan Heeger, *Landprints: The Landscape Designs of Bernard Trainor*, Princeton Architectural Press

Readings – Articles

Mary Myers, "Multivalent Landscape: The Salvation Army Kroc Community Center Case Study," *Landscape Journal* 32:2

Gretchen C Daily et al, "Ecosystem Services in Decision Making: Time to Deliver," *Frontiers in Ecology and the Environment*, Vol 7, No 1 (Feb 2009)

Sarah Taylor Lovell and Douglas Johnston, "Designing Landscapes for Performance Based on Emerging Principles in Landscape Ecology," *Ecology and Society* 14

Technical Guides

Charles Harris, Nicholas Dines, *Time-Saver Standards for Landscape Architecture*, McGraw Hill, 1997

Liat Margolis, Alexander Robinson, *Living Systems*, Birkhauser, 2007

Carol Bornstein, David Fross, *California Native Plants for the Garden*, Cachuma Press, 2005

Sunset Magazine, *The New Western Garden Book*, Oxmoor House, 2012

United States Department of Agriculture Natural Resources Conservation Service (NRC), *Urban Hydrology for Small Watersheds, Technical Release 55*. Washington DC: Government Printing Office

Online Resources

Landscape Architecture Foundation Case Study Briefs

<http://landscapeperformance.org/>

Sustainable Sites Initiative, ASLA <http://www.sustainablesites.org/>

LEED Credit Library, US Green Building Council <http://www.usgbc.org/credits>

Bowman's Hill Wildflower Preserve (BHWP) Plant Stewardship Index

<http://www.bhwp.org/psi/What-is-the-Plant-Stewardship-Index>