

# LA 362 Landscape Technologies I – Topography, Surfaces, and Water

CRN: 17108 4 credits

Mon/Wed 3:00-4:50 Fall 2015

Instructor: Leslie Ryan [lryan@uoregon.edu](mailto:lryan@uoregon.edu)

Office hrs MW 5:00-6:00 or by appt.



Herbert Bayer (1982). Mill Creek Canyon Earthworks, Kent, WA

## **Catalog description:**

Develops understanding of contours, contour manipulation, and site engineering methodologies in the design of places; fundamentals of inclusive design, storm water management, earthwork, and design development.

## **Course:**

This course introduces concepts and methods of grading and drainage, and explores how landscape architects, architects, and artists use landforms and water flow as powerful tools in design and environmental problem-solving. There are social, ecological, and poetic ramifications inherent to grading in the landscape. Topography provides the template for the development of soil, vegetation, and other biota, determining how and where habitat might emerge or be maintained. Water flow and speed responds to the shape of the terrain, which in turn impacts the potential of groundwater replenishment and water quality in receiving bodies. Sculpting new landforms or working with existing topography establishes the potential for the thickness, enclosure and depth of the land to be felt. And how we consider the shape of the land determines who has access and the quality of the experience.

## **Course content:**

Upon completion of this course with a passing grade, students shall be able to understand and demonstrate skills and knowledge in:

- Understanding the relationship between topography and design
- Grading terms and graphic standards
- Manipulation of contours and landforms
- Slope analysis and calculations
- Earthwork design
- Grading site elements (walks, ramps, terraces, building pads, roads)
- Universal access
- Storm water management

The course will develop the skills and knowledge needed to achieve the competencies established by CLARB and tested in the Grading, Drainage, and Storm Water Management section of the LARE exam:

1. Synthesize and make connections between aspects of landscape architecture and disciplines outside of landscape architecture including consultant studies
2. Design for protection and management of land resources (e.g., land forms, grading, drainage, vegetation, habitat, erosion and sedimentation control)
3. Design for protection and management of water resources (e.g., storm water, water supply, ground water)<sup>1</sup>

**Required text:**

Storm, S., Nathan, K., & Woland, J. (2013). *Site Engineering for Landscape Architects*, 6<sup>th</sup> ed. Hoboken, NJ: John Wiley & Sons.

Other reference materials recommended by CLARB:

- Hopper, L. J. (2006). *Landscape Architectural Graphic Standards*.
- Harris, C. & Dines, N. (1997). *Time-Saver Standards for Landscape Architecture*.
- Petschek, P. (2014). *Grading for Landscape Architects and Architects*.

**Method:**

This is a lecture/lab course. The class typically will begin with a short lecture, followed by lab and work on in-class exercises and assigned problems. Please come to each class with the recommended materials for drawing and calculating. Students are expected to remain in class for the entire period. The instructor and GTF will be available to answer questions during the class sessions. Lecture and work problems are supported by the reading assignments; readings must be completed prior to class. There will be several field trips around the campus taken during class time. Field trips may be announced at the beginning of class, so please come to every class prepared for the weather.

**Materials**

We will be doing in-class exercises each class session that will require you bring the following materials to each class session:

- Drafting supplies (trace paper -12" wide; vellum pad with gridlines; pencils (several weights); eraser; drafting tape; 2 triangles - 1 should be at 12" h, adjustable triangle recommended)
- Engineer's scale
- Architect's scale
- Calculator
- Additional materials will be required for model-making (cardboard; glue; utility knife; self-healing cutting mat) but will not be required in class.

It is recommended that you put all course handouts and assignments in a 3-ring binder so you have them available for reference during the course of the term.

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<sup>1</sup> CLARB. *A Step by Step Guide*. <https://www.clarb.org/Candidates/Documents/stepbystepguide.pdf>