

## Instructor Reflection

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The landscape performance education grant was applied to the University of Arizona's core LAR 554 – Site Engineering course, which is the first of our two-course, 1<sup>st</sup> professional MLA technical sequence (LAR 555 – Site Construction in Spring). The course engaged, 1<sup>st</sup> year MLA students with various backgrounds on Tuesdays and Thursdays from 2:00-4:50pm (4 credit hours). The learning objectives of the course were refined from the previous year to include:

### *Communication*

Develop the ability to clearly communicate your work visually using hand drafting tools and CAD, and by using appropriate symbols and notations.

### *Design Decisions and Performance*

Develop an understanding of design decision implications related to the four elements of Earth, Water, Fire, and Air with means to measure and evaluate landscape performance in those areas.

### *Comprehension and Skills*

Develop a thorough working knowledge of the conceptual approaches to grading and drainage through understanding the trade-offs and synergies for social and environmental welfare related to:

Human safety, comfort and universal accessibility

Surface water management

Aesthetic and spatial perception

Environmental health and stewardship

Develop familiarity with SITES and LEED rating systems and evidence-based design precedents and opportunities.

Develop an understanding of techniques and operation of measuring equipment for surveying and performance analysis.

The intent of these refined objectives was to preserve the teaching of the necessary knowledge, skills and abilities from this important core class, while also providing depth to the learning process through the natural link between the material and landscape performance. Landscape performance was seen as the “why” behind the “how” of Site Engineering to provide students with a more robust and comprehensive knowledge of their design actions. It was anticipated that by reformatting the Site Engineering course to emphasize landscape performance, the necessary technical skills could be deeply engrained on a foundation of evidence-based design. The increase in understanding of the “why” of this technical work was intended to reinforce the true nature of creative problem solving with measurements to back it up. Linking creativity and technical skills in this way was intended to change the generally negative student perception of this course to be more positive and engaging, and create a more conducive learning experience that better prepares students to be more balanced and effective professionals with integrated technical and creative abilities centered around landscape performance.

The course was divided into modules with the four elements as an organizational strategy that could touch on the various forces that are involved in site engineering. Critical

content from the traditional course was newly classified into each module, with most time devoted to Earth and Water. Weekly lectures and assignments introduced students to material that was reinforced through class field exercises that emphasized landscape performance related to the module theme. A comprehensive grading and drainage problem was then introduced to assess the technical abilities for grading and drainage and comprehension and knowledge of design decisions and performance.

Students finished the course with a technical Grading Plan and a supplemental sheet with diagrams that inform their decision process, and reflection questions on landscape performance involving soil and vegetation, storm water management, and optimizing accessibility, safety, and way finding. Their reflections indicate an emerging understanding of landscape performance, and its importance and relation to design decisions in the built environment. Their attention to landscape performance issues required them to think more comprehensively about their decisions in the grading challenge. This required more time and effort compared to the traditional instruction, which presumably reinforces the “why” behind their actions, intending to more fully establish and engrain the “how” of site engineering.

Time was a challenge and constraint at times to fully execute the class field exercises. They require a lot of planning and familiarity with the surrounding campus or locations that are reasonable to visit during class time. Some of the activities were more challenging than others to keep students engaged and allow all to use a limited number of tools.

In the future and with more planning and refinement, it would be beneficial to more fully tie the field exercises to the classroom lectures and assignments with more follow-up, as well as graphics and visuals that correlate to what is seen in the field. The final project could

also use some refinement to keep students focused on the most important objectives and not get lost in more trivial material beyond the focus of this course.

Overall I was pleased with the changes to the course to integrate landscape performance. Thoughts on introducing landscape performance in a logical and comprehensive way spurred the reformatting to modules involving the four elements, which proved to give the course more structure and connectivity between subjects covered. The class exercises provided a welcomed change in environment for a learning experience which triangulated well with lecture and studio-based work, touching many learning styles. Landscape performance seemed to fit well with the essential content of Site Engineering and is a timely introduction as a first semester course. While students did complete the course with remaining questions about landscape performance, this introduction will hopefully put them on a trajectory where they can think and explore the subject through studios and other courses that follow in throughout the MLA curriculum.