

Class Exercises

Class Exercises were conducted to involve students in hands-on examples of material covered in lectures and assignments relating to the major themes of Earth, Water, Fire and Air. Class Exercises were not graded, but participation was expected and assessed for factoring into the final grade.

Earth

Field Measuring Exercise: Students utilized tools to survey the landscape and familiarize students with standard dimensions and slopes associated with ADA Accessibility Guidelines (ADAAG) and overall comfort. Tools included Automatic Levels, Clinometer, Measuring Tapes/Wheel, and Digital Levels.

Universal Accessibility Exercise: Students were paired to record travel times for campus navigation from a starting point near a bus stop/parking lot, and end point at the entrance of our building. The paths were navigated with and without crutches to evaluate the difference in arrival time considering curbs/stairs and surface materials. Conditions were assessed and time differences were calculated to spur a conversation of the opportunities and challenges of designing and evaluating landscape performance of social aspects such as universal accessibility.

Water

Garden Example: Class time was dedicated for an outdoor lecture in the Sonoran Underwood Garden (included in LAFs Case Study Investigations) with visual explanation of the landscape performance related to storm water management.

Basin Surveying/Photogrammetry: Students were tasked to record dimensions of micro-basins near a campus building and conglomerate volume potential to be compared with surface runoff. Students experimented with photogrammetry for 3D modeling using cameras/smartphones along with traditional surveying equipment to determine volumes. Local long-term rainfall records were evaluated to determine percentile storm events to measure landscape performance.

Air

Infiltrometer: Students measured infiltration rates of various soils (compacted and undisturbed) to understand soil health and permeability.

Fire

Thermal Imaging: Students explored landscapes and exposures through thermal imaging to understand passive solar energy and benefits of planning for aspect and shading to increase landscape and building performance.