

The Conway Institute

Supporting the mission of the Conway School through programs, speakers, and workshops

Site Grading Fundamentals Workshop - Syllabus for Winter 2023

Instructor: Kim Erslev, Architect and Landscape Architect
Core faculty member of the Conway School

Description

Understanding the fundamentals of site grading provides the framework for all landscape design and building projects. It is also a critical skill to address problem drainage issues, flooding, and erosion on existing sites. In this course you will learn how to create a grading plan for a site to prevent erosion, move or infiltrate stormwater, create outdoor gathering areas, and design resilient building projects. Participants will learn how to grade planes, driveways, roads, buildings, and accessible paths. Students will also learn common slope requirements and basic math formulas to refine your grading plans. Participants should be familiar with plan and section drawing, topographic representation on site plans, and how to use an engineer's scale.

This class is self-paced, allowing students to move faster or slower as needed, however, the lecture portions will be presented as scheduled over the five-week period. Learning sessions build on each other, so participants should plan to attend all five sessions live. Lectures will be recorded and links to grading demonstration videos will be provided to participants prior to, during, and for a short time after the course is finished. Reimbursements will not be provided for missed class sessions.

Course Schedule and Zoom Link

Sundays 3:00-5:00 pm Eastern Time (US and Canada)

FIVE classes [no class on February 20]

Jan 22, 2023

Jan 29, 2023

Feb 5, 2023

Feb 12, 2023 NO CLASS

Feb 19, 2023

Feb 26, 2023

Zoom link will be provided to registered participants. All classes will be recorded on zoom for playback later. All class materials will be available to students after registration and for two months after the course.

For questions about the workshop:

contact Kim Erslev at erslev@cslid.edu; office hours available upon request

For for connectivity or logistical issues:

contact CJ Lammers at Institute@cslid.edu or 413-270-2372

All of the materials created for this course are the property of the Conway School.

Detailed Schedule

Prior to class participants will receive grading exercises via email and will need to print them out at 100% or actual scale for class on 8 ½ x 11” paper. Participants will need an engineer’s scale, pencil, eraser, red pen, calculator, and a digital camera (can be a phone) or printer scanner (preferred). A flexible curve and rolling ruler are optional.

CLASS 1: January 22rd 3-5pm

Introduction to the Fundamentals of Grading
Grading conventions, signatures, and typical slope gradients
Grading a plane in cut, fill, and cut=fill using retaining walls and 1:3 backslopes

CLASS 2: January 29th 3-5pm

Grading roads, paths, and drives
Laying out ADA paths on steep slopes
Grading roads and drives with crowns and swales

CLASS 3: February 5th 3-5pm

Grading with spot grades and formulas
Adding spot grades to planes; side slopes; roads, curbs, and sidewalks

NO CLASS ON FEBRUARY 12

CLASS 4: February 19th 3-5pm

Grading for stormwater management
Grade check dams, off-contour swales, and infiltration basins
Design and grade ponds and waterfalls

CLASS 5: February 26th 3-5pm

Grading building sites
Site buildings using spot grades, swales, and positive drainage
Class review problems and preview of Intermediate Class

Class Format (times may vary, based on number and depth of questions)

Before Class: Participants will download and print out practice sheets and homework and preview and/or review class videos when assigned.

3:00 pm Introduce and describe the new grading skills to be presented this class

3:10 pm Show new skills videos. Kim will answer questions afterwards

3:30 pm Students work on new grading skills using Practice Sheets 1 and 2
Kim will be available to help via zoom during this time to answer questions and demonstrate how to solve problems.

4:30 pm All participants meet back in the class zoom room
Kim will answer questions and do practice problems, as requested

4:50 pm Introduce homework assignment and answer last questions

5:00 pm End of class

After Class: Participants will photograph or scan worksheets and upload them to the homework folder in the class google drive. (Access will be provided after the first class)