

**Curso: AutoCAD® Civil 3D® Residential Grading  
Preparando Terrenos Residenciales.**



**Duración:** 12 Horas / 4 sesiones de 3 horas

**Horario:** Común Acuerdo

**Descripción:** In this course, students use AutoCAD® Civil 3D® to complete the engineering tasks on a residential grading design. This course guides students through one possible grading design process from examination of existing site conditions to a final grading solution.

**Prerequisitos:** AutoCAD Civil 3D Essentials o experiencia equivalente.

**Contenido del curso:**

**Examining Site Conditions**

- Lesson: Examining Existing Site Conditions
- Lesson: Determining Slope and Flow Patterns
- Lesson: Labeling Elevations at Key Locations
- Lesson: Defining the Limits of Grading Activity

**Creating Detention Basins**

- Lesson: Creating, Grading, and Analyzing Detention Basins
- Lesson: Creating Detention Basins
- Lesson: Grading Detention Basins
- Lesson: Analyzing Detention Basin Earthwork Volumes

**Designing Roadway Grading**

- Lesson: Designing Prefinal Roadway Grading
- Lesson: Creating an Existing Ground Profile



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Lesson: Creating a Finished Ground Profile

Lesson: Defining Roadway Cross Sections

Lesson: Creating a Road Surface Model

### **Working with Earthwork Volumes**

Lesson: Calculating Prefinal Earthwork Volumes

Lesson: Refining the Corridor Model and Knuckle Design

Lesson: Creating Prefinal Earthwork Calculation Surfaces

Lesson: Adjusting the Corridor Model

Lesson: Calculating Earthwork Volumes

### **Balancing Earthwork**

Lesson: Balancing Earthwork

Lesson: Refining the Final Grading Design

Lesson: Modifying Basin Grading

### **Refining Surface Grading**

Lesson: Refining Final Surface Grading

Lesson: Setting Spot Elevation Labels

Lesson: Adjusting the Corridor Surface Model

Lesson: Establishing Lot Grade and Top of Foundation Elevations

Lesson: Grading Rear Lot Lines

### **Creating and Grading Swales**

Lesson: Grading Rear-Yard Perimeter Swale

Lesson: Analyzing Prefinal Surface Flow Patterns

Lesson: Creating a Pad Buffer

Lesson: Creating a Swale

### **Grading Open Areas**

Lesson: Grading Open Areas

Lesson: Designing a Detention Basin Overflow Route

Lesson: Creating Berms

Lesson: Adding Berms to the Proposed Top Surface

### **Revising the Design**

Lesson: Revising the Grading Design

Lesson: Modifying the Proposed Road Profile

Lesson: Updating Lot Grading

### **Rendering the Design**

Lesson: Rendering the Design

Lesson: Analyzing the Slope

Lesson: Viewing Surfaces in 3D

### **Completing Plans**

Lesson: Labeling and Annotating the Plan and Profile

Lesson: Labeling Contours

Lesson: Creating Profile Sheets



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