COURSE SYLLABUS

Civil 3D Certificate Program (Self-Paced)

Develop the skills to design and refurbish public infrastructure using Autodesk Civil 3D. This hands-on program prepares you for a career in civil engineering, focusing on 3D modeling, data management, and real-world project applications.

For more information, visit
https://www.creativelive.com/learning-path/civil-3d-certificate-program



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Course Outline

This package includes these courses

- Introduction to AutoCAD (Self-Paced) (30 Hours)
- Intermediate AutoCAD (Self-Paced) (30 Hours)
- Intermediate Civil 3D: Surveying and Mapping (Self-Paced) (30 Hours)
- Intermediate Civil 3D: Transportation Design (Self-Paced) (30 Hours)
- Intermediate Civil 3D: Land Development (Self-Paced) (30 Hours)

Introduction to AutoCAD (Self-Paced)

We start at the very beginning, using AutoCAD to draw drafting symbols, kitchen and bath fixtures, and then create a floor plan. We assemble everything into one sheet file. Learn about Drawing on Layers, Adding Text, Dimensions & Plotting.

- Create drafting symbols, kitchen and bath fixtures, a floor plan and integrate all information into one deliverable sheet file
- Distinguish the differences required to generate drawings for use as annotation and real-world model components
- Create and insert blocks and externally reference files and determine the appropriate times to apply those skill sets
- Master file management, drafting on layers, integrating drawing component files and plotting while creating on the class residential project

Intermediate AutoCAD (Self-Paced)

Use AutoCAD to draw an abbreviated set of construction documents for a residential project: floor plan, roof plan, foundation plan, electrical plan & building elevations. Create, insert and link drawings. Learn the best workflow.

- Create an abbreviated set of construction documents including floor plan, foundation plan, electrical plan and building elevations for a small residential project
- Create and insert blocks, externally reference files and determine the appropriate times to apply those skill sets to optimize project efficiency
- Demonstrate layer and file management, external file referencing, use of model/layout environments and user coordinate systems
- Apply intermediate-level skills including layer management, user coordinate system development, creating sheet layout environments and plotting

Intermediate Civil 3D: Surveying and Mapping (Self-Paced)

In the Intermediate Civil 3D: Surveying and Mapping course, students learn how to manage survey data by creating, labeling, and organizing points, preparing key sets, and working with parcel and surface data in Civil 3D. The course guides students through importing survey data, subdividing parcels, and adjusting display styles to support professional surveying and mapping workflows.

- Create, label, and modify points, then organize them into point groups
- Prepare Civil 3D description key sets, linework code sets, and figure prefix databases
- Perform survey imports and create and subdivide parcels
- Modify parcel display styles and label parcel areas and segments
- Create parcel tables and generate a TIN surface
- Label surfaces and edit surface definitions
- Perform surface analysis

Intermediate Civil 3D: Transportation Design (Self-Paced)

In this course you will become familiar with alignments, surface profiles, design profiles and view windows, assemblies, corridors, intersections, sample lines, cross sections, and 3D visualization.

- Create and label multiple types of alignments
- Develop surface and design profiles
- Adjust profile view windows
- Build corridors with the required sub-elements and create a cul-de-sac
- Create an intersection corridor and create sample lines along a corridor
- Display cross sections
- Visualize a roadway in a 3-dimensional drive-through

Intermediate Civil 3D: Land Development (Self-Paced)

In this course you will build drawing template files, utilize data shortcuts, work with feature lines, learn about site interactions, create grading groups, lay out pipe networks, and draft pressure networks.

- Create multiple Civil 3D object and label styles
- Develop a custom drawing template file
- Manage data shortcuts
- Create and edit feature lines and grading groups
- Learn about pipe and pressure parts catalogs
- Lay out and annotate pipe and pressure networks
- Create a custom drawing sheet