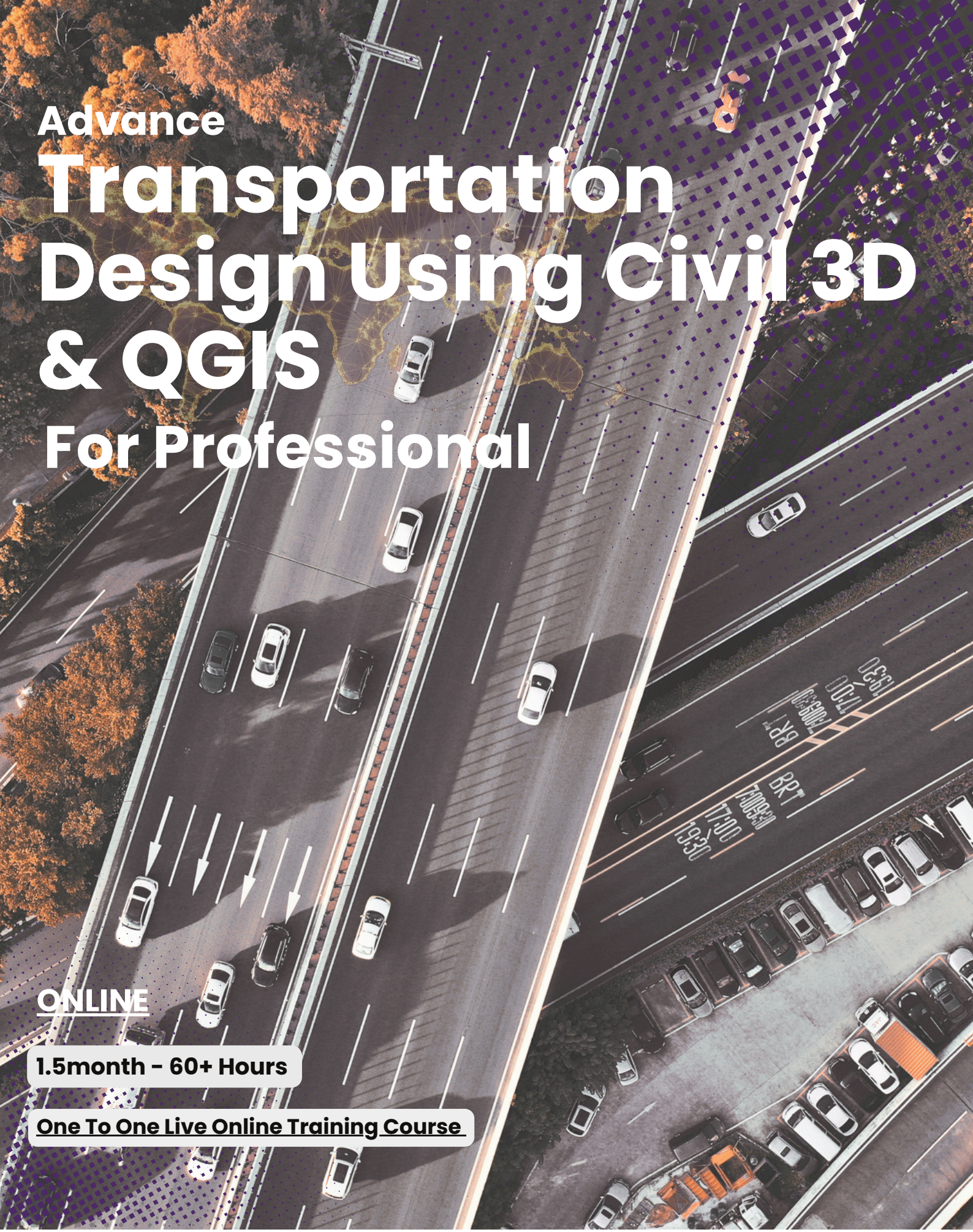

Advance Transportation Design Using Civil 3D & QGIS For Professional

ONLINE

1.5month - 60+ Hours

One To One Live Online Training Course

CERTIFIED BY

BIM Castallio

ISO 9001 QUALITY MANAGEMENT ISO 9001

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www.learning@castallio.com

Course Overview

Advance Transportation Design Using Civil 3D & QGIS, For Professional

Duration:- 60+ Hours

Elevate your expertise in delivering complex infrastructure projects, including highways, rail, airports, land development, and utility networks, by mastering a fully integrated digital workflow. This course focuses on leveraging the synergistic power of Autodesk Civil 3D, QGIS .This course is designed for experienced Civil Engineers, Transportation/Highway Engineers, GIS Specialists, BIM Managers, and Infrastructure Project Managers aiming to reduce rework, enhance decision-making, accelerate timelines, and lead the adoption of advanced digital delivery methods in the AEC sector.

Key Features

Live One-to-One Training
Personalized learning experience with expert trainers

Hands-on Training with 2+ Industry-Leading Software, workflow and Plugin

Live Project Training
Experience Real-World Design and Modeling Challenges!

Career Advancement
Enhance your BIM Management skills to stay ahead in the industry

"If you consistently practice daily and complete project work on time, we guarantee 100% placement to help you secure a job in the Design industry."

AUTODESK Civil 3D QGIS

We live in a world where information is essential to transportation design, mapping, and infrastructure development. Engineers, planners, and stakeholders rely on accurate data at the right time for informed decision-making. Our experts bring best practices and cutting-edge knowledge in specifying, procuring, delivering, assuring, storing, and utilizing transportation data, with open standards at the core of our approach. By implementing advanced information management processes, we ensure that transportation design, mapping, and infrastructure data remain robust, reliable, and reusable for long-term planning, development, and operation.

Course Modules

Industry Focus: Design Engineer, Infrastructure Civil 3D Modeler, GIS Specialist / Analyst (AEC Focus),BIM Manager, BIM Engineer, Design Coordinator, Project Managers , Infrastructure Consultant and Working Professionals in AEC

Modules	Table of contents	Duration
Module 1	**Introduction and Software Workflow**	**5 HR**
M-1.1	***Foundations of Transportation Data & BIM for Infrastructure*** • *Overview of transportation infrastructure systems (roads, bridges, transit)* • *Fundamental of Civil 3D, QGIS, Manage,* • Introduction to BIM in Infrastructure	*120 Min*
M-1.2	***Software Ecosystem for Infrastructure Projects*** • *QGIS: Spatial data prep, terrain & route analysis* • *Civil 3D: Road design, surfaces, profiles, corridors* • *InfraWorks Conceptual planning, visualization, analysis* • *ACC: Cloud-based project collaboration & issue tracking* • *Understand Design fundamentals, workflows, and industry standards (ISO 19650, AASHTO, IRC)*	*180 Min*
Module 2	**Introduction to Civil 3D and Course Workflow**	**35 HR**
M-2.1	***Introduction of Civil 3D and User Interface*** • *What is Civil 3D software and Uses* • *User Interface, Works Spaces, Tools Spaces, Panorama and Tools Pallets* • Understanding Transportation Data (survey, points cloud, cad file and counter and GIS)	*120 Min*
M-2.2	***Parcel Creation & Layout Tools – Key Features*** • *Line By Bearing* • *Parcels Overview : land development and site design* • *Parcel Layout Management* • *Advanced Parcel Editing & R.O.W. Design* • *Parcel Renumbering and Table Generation*	*180 Min*
M-2.3	***COGO Points & Survey Data Module*** • *Overview of Points : precise data management* • *Editing marker and label styles* • *Display Configuration* • *Geographic Coordinates : Managing latitude and longitude data* • *Data Integration : Importing point data and survey information*	*180 Min*
M-2.4	***Surface Module and Creation*** • *Overview of Surface Modeling* • *Advanced Surface Modification* • *Surface Modeling & Flexible Surface Types* • *Surface Editing & Refinement* • *Visualization & Annotation*	*120 Min*

Modules	Table of contents	Duration
M-2.5	***Alignment Module*** • *Precision Alignment Design* • *Dynamic Relationships* • *Geometric Flexibility* • *Labeling & Annotation Tools* • *Integrated Design Workflow*	*120 Min*
M-2.6	***Profile Module – Existing & Design Profiles*** • *Automatic Existing Ground Profiles* • *Smart Design Profiles* • *Profile View Manage & Edit* • *Clear Documentation & Annotation* • *Customize Profile view Bandset*	*180 Min*
M-2.7	***Assembly & Subassembly Module*** • *Versatile Assembly Building* • *Custom Subassembly Creation* • *Parametric Control* • *Full Corridor Integration*	*120 Min*
M-2.8	***Corridor Creation Module*** • *Model-Based Corridor Design* • *Dynamic, Data-Driven Workflow* • *Multi-Region Support* • *Integrated Surface & Quantity Tools* • *Visualization & Analysis Ready* • *Cut & Fill Analysis*	*180 Min*
M-2.9	***Intersection Design – Curb Return & Ribbon Methods*** • *Automated Intersection Creation* • *Curb Return Method* • *Ribbon-Based Design Flexibility* • *Customized and Standards-Based* • *Roundabout creation*	*180Min*
M-2.10	***Sample Line Module*** • *Automated Sample Line Generation* • *Crossing Object Sampling* • *Cross-Section Views* • *Customizable Styles & Labels* • *Integrated Quantity Takeoff*	*120Min*
M-2.11	***Grading Module*** • *Feature Line creation, Edit, set grade* • *Building Footprint grading* • *Residential grading: Lot grading & % criteria* • *Basic Pond grading*	*180Min*
M-2.12	***Pipe Network Modeling – Gravity & Pressure Systems*** • *Comprehensive Network Model: Gravity & Pressure* • *Create and manage gravity (storm, sanitary)* • *Create and manage pressure (water, force main) pipe networks* • *Intelligent Connectivity & Editing* • *Labeling, Quantities & Analysis*	*240 Min*
M-2.13	***Advanced Commands Module*** • *Custom Styles & Formulas* • *Data shortcut, D-view, X-Ref, X-clip etc.* • *Project explorer, Report generation.*	*180 Min*

Module 3	QGIS for Infrastructure & Highway Projects with Civil 3D	10HR
M-3.1	***Introduction to QGIS and User Interface*** • *What is QGIS* • *User Interface and Installation* • *Coordinate Reference Systems (CRS) and projections* • *Vector and raster data basics* • *Loading survey and topo data (CSV, SHP, GeoTIFF)*	*120Min*
M-3.2	***Spatial Data Processing for Route & Site Selection*** • *Terrain analysis: Contours, slope, aspect, hillshade* • *Creating buffer zones for environmental or ROW setbacks* • *Reclassifying raster land use/land cover for planning* • *Road influence zones & spatial queries*	*120Min*
M-3.3	***Working with Transportation Layers*** • *Importing and editing OpenStreetMap & shapefile roads* • *Creating custom road centerlines and ROW boundaries* • *Editing and digitizing alignments manually* • *Symbology and labeling for design maps*	*120Min*
M-3.4	***Integration with Civil 3D*** • *Preparing base data for Civil 3D (LandXML, SHP to CSV, GeoTIFF)* • *Exporting terrain and breaklines for surface modeling* • *Using QGIS for georeferencing scanned maps for use in Civil 3D* • *Coordinate system alignment with Civil 3D* • *Visualizing Civil 3D outputs (DWG/DXF) inside QGIS*	*120Min*
M-3.5	***Civil 3D Side – Connecting QGIS Outputs*** • *Creating surfaces from QGIS-generated DEMs and CSV points* • *Importing alignment and corridor data* • *Using QGIS for drainage catchment and flood zones before importing* • *Combining QGIS-based land use maps with Civil 3D design sheets*	*120Min*

Module 4	Live Work Final Model, Portfolio & Interview Preparation	10 HR
M-4.1	***Live Project, Portfolio & Interview Skills for Infrastructure Professionals*** • *Live Final Model – Integrated Infrastructure Project* • *Final Submission Checklist* • *Portfolio Development & Project Showcase* • *Job Interview Preparation & Placement Assistance* • *Resume Building for Transportation BIM & AEC Industry.* • *100% Placement Assistance for Successful Candidates.*	

REGISTRATION

Advance Transportation Design Using Civil 3D, and QGIS For Professional

ENROLLMENT PROCEDURE

1. FILL OUT THE REGISTRATION FORM
2. PROVIDE BASIC DETAILS (NAME, EMAIL, CONTACT NUMBER, QUALIFICATION, EXPERIENCE).
3. RECEIVE YOUR LETTER OF ADMISSION
4. CHOOSE PAYMENT METHOD (ONLINE TRANSFER, UPI, CREDIT/DEBIT CARD)
5. START LEARNING & PROJECT WORK

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