

Forensic and Collision Investigation

Introduction to Laser Scanning with Editing and Animation module



Immersive, Accurate, 3D Environments

Building 3, Chiswick Park,
566 Chiswick High Road,
London W4 5YA,

E: info@advancedlaserimaging.com

W: www.advancedlaserimaging.com

T: +44(0)20 8899 6530

This course has been created for Forensic Imaging Units, Collision Investigation Teams and Crime Scene Investigators who have purchased a laser scanner and want to go beyond simple capture, registration and production of 3D environments and 2D plans.

By the end of the Advanced Laser Imaging Academy course, the user will be able to scan efficiently, register datasets together, clean and edit pointcloud data proficiently, present data dynamically to a basic level, produce stills, including plans and elevations and finally produce controlled animation through the dataset.

Quality Assurance and Risk Assessment processes are also included to ensure that products are correctly created for use in case conferences and court. The course has been designed by experienced professionals with over 7 years experience in delivering 3D laser scan measured information into UK courts and covers the complete process from capture to delivery through practical exercises and hand on training.

DAY ONE

Course Introduction

- Introduction to ALI
- Introduction to Presenter
- What is Laser Scanning / How does it work
- Uses / Limitations

Laser Scan Capture

- Mock Scene
 - Assess the scene
 - Scan Location Considerations
 - What do I need to capture
 - What would my ideal setup locations be?
 - Safety Considerations
 - For You
 - For the Equipment
 - For other Police Investigators
 - For the Public
 - Pointcloud coverage (covering shadows)
 - Distance/Angle to critical elements
 - Registration Thoughts
 - Targets? Cloud to Cloud? Natural Points of Detail
 - Resolution / Time / No. of Setups Triangle (more setups vs less)
 - Capturing all you need (Tyre marks etc. - tips and tricks)
- Scanner Settings

LUNCH

Data Handling / Processing

- Notes on Storage / Capture Media
- Creating an initial RAW Evidential Copy

Registration Software

- Setting up a new project
- Importing data
- Registration
- Cleaning
- Export

DAY TWO

Day One (capture and overall workflow) Recap

Registration Quality Assurance Checks

Discussion around Precision, Accuracy & Resolution

Pointools

- Import
- Navigation
- Clip Box
- Measurement
- Orthographic Images

LUNCH

Data Presentation and Use (Pointools cont.)

- Saved Views in Pointools
- Pointools Navigation Task
- Pointools Measurement Task
- Pointools Orthographic Images Task
- Bringing Orthographic Images into AutoCAD

DAY THREE

Day Two (registration and Presentation workflow) Recap

Advanced Pointools Techniques

- Point Selection Tools
- Layers and Editing Points
- Point Colouring
- Exporting and Importing Pointclouds
- Moving and rotating Pointclouds and Models (Pointools v8i Only)

LUNCH

Animation Techniques

- Terminology
- Timeline, key frames and tweening
- Video output, Standards, Codec's
- Camera animation practical
- Refining Animation timings
- Object and camera animation practical (Pointools v8i Only)

Course Round Up

END