

Course Title: Basic 3D Scanner

Course Code: EEA 208

Course Background / Summary:

3D scanning technology has revolutionized various industries, including manufacturing, design, architecture, and healthcare. Understanding the basics of 3D scanning is essential for professionals seeking to capture real-world objects and environments in digital form. This course provides participants with an introduction to the principles, methods, and applications of basic 3D scanning technology.

Course Objectives:

- Understand the significance of 3D scanning in modern industries and applications.
- Grasp the fundamental principles of 3D scanning technologies and techniques.
- Learn about different types of 3D scanners and their working principles.
- Acquire skills in setting up and operating basic 3D scanning equipment.
- Develop proficiency in capturing 3D data and creating digital models.

Target Audience:

- Architects interested in digitizing physical spaces for design and renovation projects.
- Industrial designers aiming to create digital prototypes from real-world objects.
- Surveyors and geospatial professionals looking to enhance their data collection techniques.

Course Duration: 3 Days

Course Contents

1.0 Introduction to Basic 3D Scanning: Importance and Applications

2.0 Principles of 3D Scanning Technologies: Laser, Structured Light, Photogrammetry

3.0 Types of 3D Scanners: Handheld, Tripod-Mounted, and Fixed Scanners

4.0 Operating and Setting Up Basic 3D Scanning Equipment

5.0 Data Capture and Point Cloud Generation

6.0 Meshing and Creating Digital 3D Models