

Course Title: IoT Architecture

Course Code: IR 117

Course Background / Summary:

The Internet of Things (IoT) has revolutionized the way we interact with technology. From smart homes to industrial automation, IoT devices have become an integral part of our daily lives and business operations. However, building effective IoT solutions requires a deep understanding of IoT architecture principles. This course is designed to provide participants with comprehensive knowledge and hands-on experience in IoT architecture, enabling them to design scalable, secure, and efficient IoT systems.

Course Objectives:

- Grasp the foundational concepts of IoT and the hardware and software requirements.
- Develop essential skills in programming ESP32, including tasks like LED blinking and touch sensor integration.
- Explore practical projects that showcase the capabilities of IoT connectivity.
- Learn optimization techniques to enhance the efficiency and performance of ESP32-based IoT solutions.

Target Audience:

- Mechanical Engineers, Technicians, Mechanical Lecturers

Course Duration: 2 Days

Course Contents

1.0 Introduction

- Hardware and Software Requirements
- What is ESP32

2.0 ESP32

- ESP Board Overview
- ESP 32 Pinout V1 DOIT

3.0 Load Code

- Led Blink
- Touch Sensor
- Analog Input
- PWM Signal
- Servo Motor
- Internet
- Projects