



**LEARN WELL
TECHNOCRAFT**

IOT SYLLABUS

8TH YEAR OF ACCOMPLISHMENTS

**AUTHORIZED GLOBAL CERTIFICATION CENTER FOR
MICROSOFT, ORACLE, IBM, AWS AND MANY MORE.**

08411002339/07709292162

info@dw-learnwell.com

www.dw-learnwell.com

203, Supreme Center, ITI Road, Above Pizza Hut,
Near Parihar Chowk, Aundh, Pune

ACHIEVEMENTS FROM TRAINING

- CANDIDATE WILL BE ABLE TO SHOW 2-3 YEARS EXPERIENCE AFTER TRAINING.
- REAL TIME SCENARIOS, CASE STUDIES, PROJECTS INCLUDED.
- REAL TIME DATA PROVIDED FOR PRACTICE.
- SOFTWARE WILL BE INSTALLED ON CANDIDATES MACHINE.
- INDIVIDUAL 1 ON 1 DISCUSSIONS FOR RESUME MODIFICATIONS.
- LEARN FROM INDUSTRY EXPERTS.
- GLOBAL CERTIFICATION PREPARATION.
- APPEAR FOR GLOBAL CERTIFICATION AT LEARN WELL TECHNOCRAFT ITSELF.
- GET DISCOUNTED CERTIFICATION VOUCHERS.
- AUTHORIZED GLOBAL CERTIFICATION CENTER FOR PEARSON, PSI, KRYTERION.



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RECOMMENDED

COURSES BEST SUITED WITH WITH IOT

- PYTHON
- DATA ANALYTICS
- CLOUD COMPUTING



IOT (Internet of Things) Syllabus

Introduction & Architecture of IoT

- Introduction of Internet of Things
 - Concepts and definitions of IoT
 - History of IoT
 - Applications
 - Requirements of IoT
- Market Trends
- Opportunities in IOT
- Challenges & Future
- IOT Architecture
- Major components of IoT
- IoT enabling technologies
- IoT Standards
- IoT Entities
 - Sensors, Actuators
 - Gateways
 - Cloud
 - Mobile/Web Applications
- IOT Software Development Platforms
 - Python
 - C
 - C++

Embedded Linux OS

- Introduction to Embedded Linux
 - OS Fundamentals
 - OS Architecture
 - Linux Command line
 - Package management
 - Internals, application and IoT Support

- Introduction to Hardware Platforms
 - ARM Architecture
 - Introduction to Arduino development platform
 - Introduction to RaspberryPI development platform

IoT with Arduino

- Hands on Experience with Arduino(Firmware development & RTOS)
 - General Purpose I/O(GPIO)
 - Serial Communication Interfaces: RS-232/485
 - Synchronous Peripheral Interfaces: I2C,SPI
 - Sensors interfacing with Raspberry PI

IoT with Raspberry PI

- Hands on Experience with RaspberryPI (Firmware development)
 - Setting up Raspberry PI SD Card
 - Raspberry PI booting up & Initialization
 - General Purpose I/O(GPIO)
 - Serial Communication Interfaces: RS-232/485
 - Synchronous Peripheral Interfaces: I2C,SPI
 - Sensors Interfacing with Raspberry PI

IoT Real Time Operating Systems

- Introduction Real time Operating Systems
 - GPOS vs. RTOS
 - Characteristics of RTOS
 - Application of RTOS
- Internet of Things Real time Operating Systems
 - Contiki/FreeRTOS/RIOT/TinyOS
 - Application development using IoT RTOS

Wireless Sensor Networks & Protocols

- Wireless Sensor Networks
- Introduction to WSNs
 - Topologies in WSNs
- Wired Communication Protocols
 - Ethernet
 - Serial Communications
- Wireless Communication protocols
 - Wifi
 - RF
 - IPV4/V6
 - 6LOWPAN
 - ZigBee(IEEE802.15.4)
 - BLE
 - GSM(2G/3G/LTE)

Machine to Machine Communication

- Machine to Machine Communication
 - Role of M2M in IoT
- M2M Example Application
 - MQTT/MQTT-SN,
 - COAP

Major Project

- IoT Application/Real Project development
 - Smart Home
 - Smart Transportation
 - Smart Health

Also Available

- Internships - Paid / Free
- Internship certifications on successful completion
- Final year Collage Projects on Latest Skills
- Special Project batches
- Collage Seminars