

IoT & Embedded Systems Program

Hardware Meets Intelligence. Master the full curriculum. Build verified projects. Get hired.

3

DURATION TRACKS

4

PROJECTS

2

BATCH MODES

20

STUDENTS/BATCH

HYBRID MODEL

2 Solo + 1 Pair + 1 Group Capstone

Triple Track

8W Standard + 4W Fast + 2W Capstone

Mentor Verified

Every project reviewed

PAT Certified

Score visible to all HRs

8-Week Standard Syllabus

Weekday Batch: Mon–Fri | 3 Hrs/Day | 40 Sessions | 120 Contact Hours

Weekend Batch: Sat–Sun | 6 Hrs/Day | 16 Sessions | 96 Contact Hours

Same curriculum also available as a 4-Week Fast Track and a 2-Week Capstone Track — see following pages.

01	Embedded Fundamentals	SOLO 1 START
ESP32/Arduino, GPIO, PWM, C/C++, PlatformIO, UART serial		
02	Sensors & Protocols	SOLO 1 DELIVERY
Temp, humidity, PIR, gas, light; I2C, SPI, OLED, interrupts		
03	Wireless Comms	SOLO 2 START
Wi-Fi, HTTP on MCU, Bluetooth/BLE, MQTT, Mosquitto, mesh		
04	IoT Cloud Platforms	SOLO 2 DELIVERY
AWS IoT Core, ThingSpeak, Firebase IoT, InfluxDB, Grafana		
05	Edge & TinyML	PAIR START
TF Lite Micro, on-device inference, anomaly detection, power-aware		
06	Automation & Reliability	PAIR DELIVERY
Node-RED, OTA firmware, fleet mgmt, watchdog timers, LoRa		
07	Security & System Design	CAPSTONE START
TLS, secure boot, PCB basics (KiCad), enclosure, system reliability		
08	Capstone & Demo	CAPSTONE DELIVERY
Full integration, E2E testing, circuit diagrams, hardware live demo		

WEEKDAY SESSION — 3 HOURS

40 sessions, Mon–Fri

0:00–10:00	10:00–40:00	40:00–90:00	90:00–110:00	110:00–120:00
Recap	Concept	Build Sprint	Standup	Wrap

WEEKEND SESSION — 6 HOURS

16 sessions, Sat–Sun

0:00–8:00	8:00–32:00	32:00–72:00	72:00–88:00	88:00–96:00
Recap	Concept	Build Sprint	Standup	Wrap

4-Week Fast Track Syllabus

Weekday Batch: Mon–Fri | 3 Hrs/Day | 20 Sessions | 60 Contact Hours

Weekend Batch: Sat–Sun | 6 Hrs/Day | 8 Sessions | 48 Contact Hours

Same 4 project phases as the Standard track, condensed into a single week each for an accelerated pace.

01	Embedded & Sensors	SOLO 1
	ESP32/Arduino, GPIO, PWM, sensors, actuators, I2C/SPI, OLED	
02	Wireless & Cloud	SOLO 2
	Wi-Fi, MQTT, BLE, HTTP, AWS IoT/ThingSpeak, InfluxDB + Grafana	
03	Edge & Automation	PAIR
	TinyML, Node-RED, OTA, power management, security, multi-device	
04	Integration & Ship	CAPSTONE
	Full assembly, PCB basics, testing, reliability, documentation, demo	

WEEKDAY SESSION — 3 HOURS

20 sessions, Mon–Fri

0:00–5:00	5:00–20:00	20:00–45:00	45:00–55:00	55:00–60:00
Recap	Concept	Build Sprint	Standup	Wrap

WEEKEND SESSION — 6 HOURS

8 sessions, Sat–Sun

0:00–4:00	4:00–16:00	16:00–36:00	36:00–44:00	44:00–48:00
Recap	Concept	Build Sprint	Standup	Wrap

2-Week Capstone Track Syllabus

Weekday Batch: Mon–Fri | 3 Hrs/Day | 10 Sessions | 30 Contact Hours

Weekend Batch: Sat–Sun | 6 Hrs/Day | 4 Sessions | 24 Contact Hours

Our most intensive track — the full curriculum compressed into 2 weeks, ending in a live capstone build and demo.

01

Embedded, Sensors & Wireless

FOUNDATION SPRINT

ESP32/Arduino, GPIO, I2C/SPI; Wi-Fi, MQTT, BLE, cloud dashboards

02

Edge, Integration & Capstone Ship

CAPSTONE SPRINT

TinyML, Node-RED, OTA; full assembly, testing, hardware live demo

WEEKDAY SESSION — 3 HOURS

10 sessions, Mon–Fri

0:00–2:30	2:30–10:00	10:00–22:30	22:30–27:30	27:30–30:00
Recap	Concept	Build Sprint	Standup	Wrap

WEEKEND SESSION — 6 HOURS

4 sessions, Sat–Sun

0:00–2:00	2:00–8:00	8:00–18:00	18:00–22:00	22:00–24:00
Recap	Concept	Build Sprint	Standup	Wrap

Two Career Pathways

Both available simultaneously — not mutually exclusive

Employment Track

1. Complete 4 verified projects
2. Take PAT certification exam
3. Portfolio published to HR Portal
4. HRs discover and shortlist you
5. Interview scheduled via platform
6. Offer extended — placement tracked

Startup Track

1. Build investor-grade capstone
2. Mentor verifies for Investor Portal
3. List project with pitch deck & demo
4. Investors discover your project
5. Pitch invitation and presentation
6. Startup mentorship and funding

Project Assessment Test (PAT)

Your certification score — visible to every HR on the platform

MCQs 20% | Coding 25% | Architecture 20% | Viva Defense 25% | Peer Review 10%

90–100 Elite

Top 5% — senior roles, startup founding

75–89 Pro

Job-ready with solid fundamentals

60–74 Certified

Entry-level — core concepts proven

Mentor Verification — The Trust Engine

No project reaches the HR or Investor portal without rigorous mentor review.

Code Quality 25% | Functionality 25% | Architecture 20% | Docs 15% | Deployment 15%

Ready to Build Your Future?

4 verified projects | PAT certification | Two career pathways

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