

Six-Month Complete Pathway

STEM Innovation with micro:bit

Beginner to Advanced

Ages 11+

From First Build to Full Robotics

A hands-on, project-based journey for young learners moving from first curiosity to confident robotics builders.



6

MONTHS

24

WEEKS

6

LEARNING PHASES

2 / week

SESSIONS

2

CAPSTONES

In-Person

AT DUBAI

Certificate

ON COMPLETION

Programme Overview

Ascend's flagship micro:bit pathway for young learners, two levels moving from block-based foundations into servo-driven robotics and independent capstones.

Portfolio projects include:

- Heart, Animated Animals & First LED Builds
- Capstone 1: Creative Coding Showcase
- Sensor Builds: Nightlight, Jukebox & Rangefinder
- Servo-Driven Mechanism: Smart Wiper
- Capstone 2: Independent Robotic Goalkeeper

Six-Month Learning Roadmap

Learners progress through block-based coding, external sensor modules, servo mechanisms and independent robotics builds, building a portfolio of real devices along the way.

- Digital Foundations & First Builds**
Month 1: micro:bit hardware, MakeCode & coding basics.
- Sensors, Sound & Wireless Play**
Month 2: Temperature, sound, radio & timing in every build.
- Rhythm, Data & Creative Coding**
Month 3: Combining every skill into expressive, creative builds.
- Servo Fundamentals & Precision Sensing**
Month 4: Servo control with joystick, ultrasonic & infrared.
- Multi-Sensor Devices**
Month 5: Combining servos with sensors for feedback loops.
- Independent Systems & Capstones**
Month 6: Independently-controlled robotic systems.

Skills Students Gain

Block-Based Coding (MakeCode)

Digital Logic & Circuits

Built-in Sensors & Inputs

Wiring & Circuit Assembly

Sensor Kit Modules

Servo Motor Control

Multi-Sensor Integration

Problem Solving

Computational Thinking

Collaboration

Creative & Independent Design

Public Presentation

Portfolio Building

Programme Details

Level
Beginner to Advanced

Duration
6 Months · 24 Weeks

Schedule
2 sessions/week · 60 min

Format
In-Person · English / Arabic

Includes
6 monthly builds + capstone + showcase

Build Real Projects · Learn by Doing · Think Like an Engineer

Give Your Child Real Robotics Skills for the Future

Enroll Now

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