



## Introduction to Coding with Scratch

**\$570 / 8 x 2-hr sessions**

- For ages 8+.
- Introduction to coding using Scratch, block-based programming.
- Create games, animations & stories.



## Python Coding - Level 1

**\$570 / 8 x 2-hr sessions**

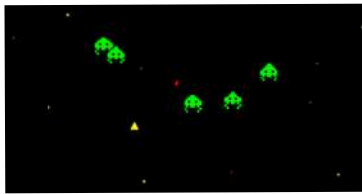
- For ages 10+.
- Introduction to programming & Python (syntax, print function, users input, decision making, loop structures & function).



## Python Coding - Level 2

**\$570 / 8 x 2-hr sessions**

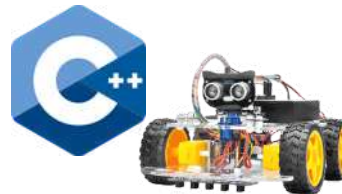
- For ages 10+ who have completed Python 1.
- Learn print function, decision commands, flowcharts, create own functions, use list in Python & for-loop method.



## Python Coding - Level 3 Games

**\$570 / 8 x 2-hr sessions**

- For ages 10+ who have completed Level 2.
- Guided step-by-step in making games.
- Learn to apply commands, add sound & background image.
- Publish & share your game!



## Arduino Robotics & C++

**\$570 / 8 x 2-hr sessions**

- For ages 11-16.
- Introduction to Arduino micro-controller, C++ programming & basic electronic components.
- Program Arduino using Scratch, with electronic sensors & actuators (motors, buzzers & displays).

**Mon - Sat**

**10am -12noon\***

**1:30pm - 3:30pm**

**3:30pm - 5:30pm**

\*only non-holiday camp periods

**Sun**

**3pm - 5pm**

**WhatsApp:**

**+65 8881 5195**

**www.robotics.com.sg**

**#03-41/43,  
Coronation Shopping Plaza,  
587 Bukit Timah Road,  
Singapore 269707**

# Weekly Robotics Courses

Trial / appreciation  
For ages 6+  
\$90 / 2-hour session



## Level 1 Beginner \$510 / 8 x 2-hr sessions

- For ages 6+, preferably with experience in our Lego Engineering courses.
- Develop building skills & an understanding of simple coding concepts.
- Lego WeDo/NXT/Funbots.



## Level 2 / 2A Beginner \$510 / 8 x 2-hr sessions

- For ages 8+, or those who have completed Level 1.
- Build & program intermediate robotics models using Lego NXT with different sensors & perform different tasks.



## Level 3 / 3A Intermediate to Advance \$510 / 8 x 2-hr sessions

- For ages 9 to 10 who have completed Level 2.
- Build more complicated robots & program them to respond to multiple sensors, using Lego NXT blocks.



## Level 4 Young Inventor \$510 / 8 x 2-hr sessions

- For ages 9 to 10 who have completed Level 3, have knowledge of key NXT robotics parts, can program NXT-G independently & can attend on a regular basis.
- Design & create own NXT robot, plus presentation of the project.



## SPIKE Beginner \$570 / 8 x 2-hr sessions

- For ages 9+, or those who have completed Level 4.
- Build & program simple robots, using Lego SPIKE Prime app.
- Apply knowledge of force, color & ultrasonic sensors.



## SPIKE Intermediate \$570 / 8 x 2-hr sessions

- For those who have completed Level 4.
- Build & program robots with multiple sensors & more complex mechanical designs, using Lego SPIKE Prime.
- Application of Gyro Sensor
- Program with advanced EV3 commands.



## SPIKE Advance \$570 / 8 x 2-hr sessions

- Design, build & program own robot, using Lego SPIKE Prime basic & expansion sets.
- Meet criteria in terms of size & number of sensors used.
- Apply engineering concepts in robot design.
- Present project in a video recording.



## EV3 Basics \$570 / 8 x 2-hr sessions

- For ages 11+, or those who have completed Level 7.
- Build robots using Lego EV3 robotics.
- Program movements with EV3 sensors.
- A theory & practical assessment will be conducted to assess learning progress & suitability to proceed to the next level.

**Mon - Sat**  
10am -12noon\*  
1:30pm - 3:30pm  
3:30pm - 5:30pm  
\*only non-holiday camp periods

**Sun**  
3pm - 5pm

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### EV3 Intermediate \$570 / 8 x 2-hr sessions

- For ages 11+ who have completed Level 8 & keen to explore advance EV3 models.
- Build EV3 robots with multiple sensors & more complex mechanical designs.
- Program with advance EV3 commands, line following & obstacle avoidance robots.



### EV3 Young Inventor II \$570 / 8 x 2-hr sessions

- For ages 12+ who are keen to develop programming skills & able to work independently.
- Design, build & program own robot to perform specific tasks.
- Prepare a presentation of the project.



### EV3 Advance/Robot Inventor \$570 / 8 x 2-hr sessions

- For ages 12+.
- Learn mOwayWorld programming for mOway mini-robots, Scratch programming for mOway/Lego NXT robots, RobotC for Lego NXT & EV3, Arduino Robotics, C++ & Raspberry Pi programming.



### Robotics Competition Preparation \$570 / 8 x 2-hr sessions + competition registration fees\*

- First Lego League (FLL), National Robotics Competition (NRC), IDE Series & RIC \*registration fees vary.
- Strictly by invitation.
- Invitees will represent Robotics Connection in a team.

**Mon - Sat**

**10am -12noon\***

**1:30pm - 3:30pm**

**3:30pm - 5:30pm**

\*only non-holiday camp periods

**Sun**

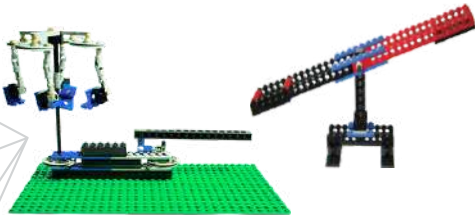
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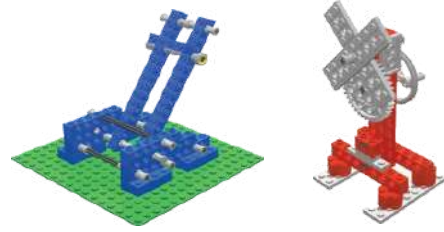
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## Apprentice Engineer

**\$65 / 1 x 1-hr trial**  
**\$245 / 4 x 1-hr weekday sessions**  
 (6 -wk validity)  
**\$440 / 8 x 1-hr sessions**  
 (12-wk validity)

- For ages 5-6.
- Introduction to construction & basic mechanisms.
- Develop fine motor skills & visual-spatial abilities, while exploring various concepts, such as cause & effect, gears, pulleys & more.



## Junior Engineer - Levels 1 & 2

**\$60 / 1 x 1-hr trial session**  
**\$220 / 4 x 1-hr weekday sessions**  
 (6-wk validity)  
**\$400 / 8 x 1-hr sessions**  
 (12-wk validity)

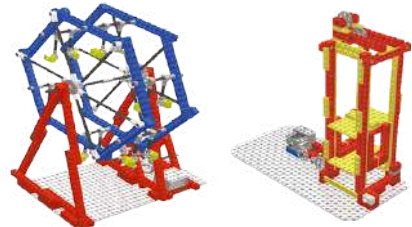
- For ages 6-8, \*or those who have completed Apprentice Engineer.
- Introduction to a variety of mechanical designs & concepts.
- Build different kinds of Lego machines.
- Explore & develop an understanding of various science concepts, such as friction, gravity, gears & levers, as well as their real-life applications.



## Senior Engineer - Levels 1 and 2

**\$60 / 1 x 1-hr trial session**  
**\$220 / 4 x 1-hr weekday sessions**  
 (6-wk validity)  
**\$400 / 8 x 1-hr sessions**  
 (12-wk validity)

- For ages 8+, \*or those who have completed Junior Engineer.
- Build more complex Lego machines.
- Learn more in-depth about various physics and engineering concepts, including gear ratios, lever classes, stability, among others.



## Master Engineer

**\$60 / 1 x 1-hr trial session**  
**\$220 / 4 x 1-hr weekday sessions**  
 (6-wk validity)  
**\$400 / 8 x 1-hr sessions**  
 (12-wk validity)

- For ages 9+, \*or those who have completed Senior Engineer.
- Build Lego machines that are larger in scale & more complex in terms of mechanical design.
- Apply all previous building skills & science concepts acquired to complete and problem-solve the projects .

<u>Mon/Tue/Wed/ Thu/Fri</u>	<u>Sat</u>
1pm - 2pm	10am - 11am
2pm - 3pm	11am -12pm
3pm - 4pm	1pm - 2pm
4pm - 5pm	2pm - 3pm
	3pm - 4pm
	4pm - 5pm

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