

# Weekly Robotics Courses

Trial class: \$90 / 2-hr session One-time registration fee: \$50



## 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.
- Learn with Lego WeDo &/or Lego Mindstorms NXT.



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

- For ages 9+ who have completed Level 3, have knowledge of key Lego Mindstorms 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 Advanced \$570 / 8 x 2-hr sessions

- For ages 9+ who have completed SPIKE Prime Intermediate level.
- 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.



# 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 Mindstorms NXT with different sensors & perform different tasks.



### SPIKE Prime 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.



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

- For ages 9+, or those who have completed Level 4.
- 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.



## Level 3 / 3A Advanced \$510 / 8 x 2-hr sessions

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



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

- For ages 9+ who have completed SPIKE Prime Beginner level.
- Build & program robots with multiple sensors & more complex mechanical designs, using Lego SPIKE Prime.
- Application of Gyro Sensor.
- Program with advanced Lego Mindstorms EV3 commands.

#### <u>Mon - Sat</u> 10am -12noon\* 1:30pm - 3:30pm 3:30pm - 5:30pm \*only non-holiday camp periods <u>Sun</u> 3pm - 5pm

#### WhatsApp: +65 8881 5195

## www.robotics.com.sg

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



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

- For ages 9+ who have completed EV3 Beginner level, & keen to explore advanced Lego Mindstorms EV3 models.
- Build EV3 robots with multiple sensors & more complex mechanical designs.
- Program with advance EV3 commands, line following & obstacle avoidance robots.



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

- For ages 9+ who have completed EV3 Intermediate level, & keen to develop programming skills, plus able to work independently.
- Design, build & program own robot to perform specific tasks.
- Prepare a presentation of the project.



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

- For ages 9+ who have completed EV3 Project / Young Inventor II level.
- Use all prior knowledge gained on mechanical designs, robot movements, usage of sensors and so on to develop and program own robot using Lego Mindstorms EV3 system.



# Arduino Robotics & C++ Programming \$570 / 8 x 2-hr sessions

- For ages 9+ who have completed EV3 Advanced / Robot Inventor.
- Introduction to Arduino electronics, mechanics & C++ programming.
- Learn different components, such as LED, buttons & motors.
- Build & program a driving robot.

Series, RIC & World Robot Games.
\*registration fees vary.
Strictly by invitation.
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Invitees will represent Robotics Connection in a team.

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**Robotics Competition Preparation** 

\$570 / 8 x 2-hr sessions +

competition registration fees\*

Robotics Competition (NRC), IDE

• First Lego League (FLL), National

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> <u>Sun</u> 3pm - 5pm



# Weekly Coding Courses





#### Introduction to Coding with Scratch \$570 / 8 x 2-hr sessions

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



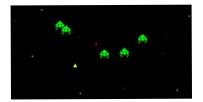
Python Coding - Level 2
\$570 / 8 x 2-hr sessions

- 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 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 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!

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

> <u>Sun</u> 3pm - 5pm

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#03-41/43, Coronation Shopping Plaza, 587 Bukit Timah Road, Singapore 269707 **CS** Weekly Lego Engineering Courses reg

One-time registration fee: \$50



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.

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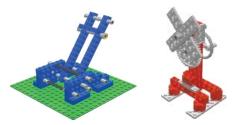
- Introduction to construction & basic mechanisms.
- Develop fine motor skills & visual-spatial abilities, while exploring various concepts, such as cause & effect, gears, pulleys & more.



## Senior 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)

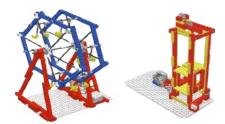
- For ages 8+, \*or those who have completed Junior Engineer.
- Build more complex Lego machines.
- Learn more in-depth about various physics and engineering concepts, including gear ratios, lever classes, stability, among others.

<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



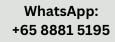
Junior Engineer \$60 / 1 x 1-hr trial session \$220 / 4 x 1-hr weekday sessions (6-wk validity) \$400 / 8 x 1-hr sessions (12-wk validity)

- For ages 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.



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 8+, \*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 .



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