The Thinking Space™

Junior Engineers

Robotics for Beginners

Instructor: Teacher Mohamad Mamdouh

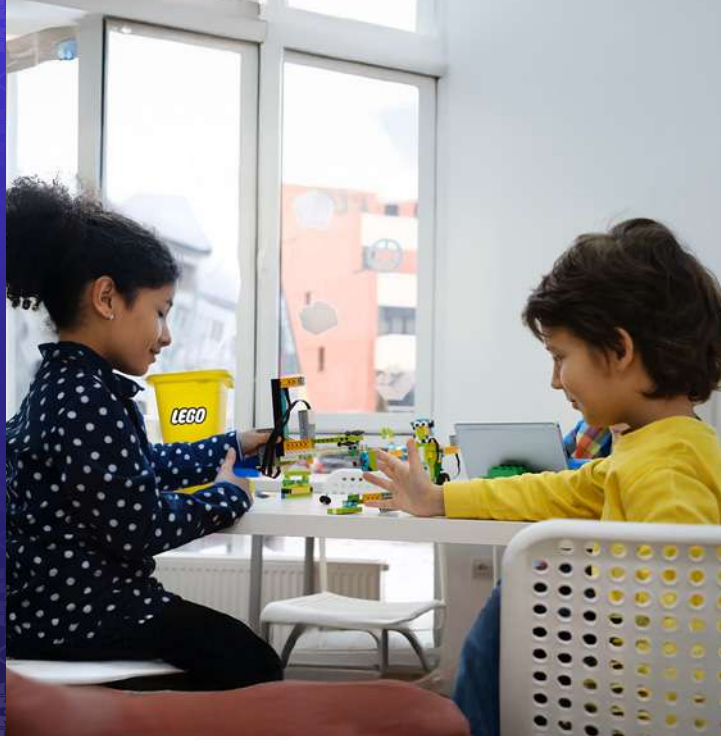
Starting 6th September 2025
(Every Saturday & Sunday)

Attend Any Day -
Each Session Stands Alone

10.00 a.m. – 12.00 p.m.

RM50 per session

Course conducted in English



About This Course

Ignite curiosity and confidence with LEGO SPIKE Prime, a hands-on robotics kit designed to make STEM fun and accessible. Students will build, code and problem-solve using LEGO bricks, intelligent sensors, programmable motors and a powerful hub. Through engaging projects and challenges, learners will develop real-world engineering and coding skills in an interactive, team-based environment. This course also uses the same platform featured in national robotics competitions across Malaysia, giving students a head start in competitive STEM arenas.

Objective

- Introduce students to fundamental robotics and programming concepts using LEGO SPIKE Prime.
- Foster problem-solving, critical thinking and creativity through project-based learning.
- Develop teamwork and communication skills by engaging in collaborative design challenges.
- Inspire students to explore STEM fields through real-world applications of robotics.

Learning Methodologies

1. **Hands-On Learning**
   Students actively build and code their own robotic creations, reinforcing theoretical concepts through physical application.
2. **Collaborative Teamwork**
   Students work in pairs to encourage peer learning, creativity and communication.
3. **Scaffolded Progression**
   Lessons are structured to increase in complexity, allowing students to gradually develop competence and confidence.
4. **Instructor-Guided Exploration**
   Instructors provide direct teaching, facilitate group discussions and offer real-time support during problem-solving activities.

Learning Outcomes

By the end of this course, students will be able to:

- Apply the engineering design cycle: define a problem, prototype, test, evaluate and iterate.
- Use programming constructs such as sequences, loops, conditionals, variables, waits, arrays and sensor-based decisions.
- Develop computational thinking skills: decomposition, debugging, pattern recognition and algorithm design.
- Work collaboratively, communicate design decisions and reflect on design effectiveness.

Target Participants

Learners aged 7-16 who are interested in robotics and coding.

Scan QR code to sign up

Sign Up the Course